Standard Floating License Manager

Installation and User's Guide

4701 Patrick Henry Drive, Bldg. 2
Santa Clara, CA 95054
Telephone (408) 567-1000

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Standard Floating Licensing Manager
User's Manual
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4701 Patrick Henry Drive, Building #2
Santa Clara, CA 95054

Phone: (408) 567-1000

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Style Conventions		
Font Style/Convention	**Description**	**Example**
•	This represents a list of items or terms.	• Bullet A • Bullet B • Bullet C
1. 2. 3.	This represents a set of directions to perform an action.	To open a door: 1. Unlock the door by inserting the key into keyhole. 2. Turn key counter-clockwise. 3. Pull out the key from the keyhole. 4. Grab the doorknob and turn clockwise and pull.
→	This represents a sequence of menu options and GUI buttons to perform an action.	**File→Open**
`Courier`	This represents the commands, parameters, and variables syntax.	`HAPPY BIRTHDAY`
New Century Schoolbook Bold	This represents the menu options and buttons in the GUI.	**File**
New Century Schoolbook Italics	This represents the equations.	*abc=xyz*
Note:	This represents the additional important information.	**Note:** Make sure you save often when working on a manual.
NEW CENTURY SCHOOLBOOK IN SMALL CAPS	This represents the names of the product names.	EXPERT, GATEWAY, HIPEX, SMARTSPICE, STELLAR, and UTMOST.

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Chapter 1: Introduction

1.1: What is SFLM

This chapter introduces the license management software Standard Floating License Manager (SFLM). For those unfamiliar with SFLM, see Section 1.2: "What's New in SFLM8". The following chapters provide a step-by-step guide through the first time installation to show the typical screens that you will face.

1.1.1: Installation Steps

Step	Overview	Details
Install Software	Section 1.2.4: "Installing Software"	
Register SFLM License Server	Section 1.2.5: "License Server Registration"	Chapter 2: "Registration"
Install License File	Section 1.2.6: "License Installation"	Chapter 3: "License Installation"
Set Default License Server for this Installation Directory	Run `sflm_access`	Chapter 4: "Specifying the License Server(s) Using SFLM Access"
Set up User Environment	Add `/<installdir>/bin` to user path (in Unix only).	Chapter 5: "Customer Environment Settings"
Test Environment	Section 5.5: "Testing User Environment"	

Note: Check Chapter 9: "Virtual Private Networks (VPNs) and Firewalls"for Firewall and VPN connection problems.

1.2: What's New in SFLM8

- Real-time license remix. SFLM8 is the first version that supports token licenses. Token licenses are the basis of real-time remix. License files with token licenses (format 8 license files) cannot be used with older SFLM server versions.
- You can use multiple USB HASP keys on a single server. This allows you to transfer some licenses to laptops or home computers and later combine them onto a central server.
- License usage logging into "tab separated values" files. Summaries may be kept by product or user. Complete logs of license check-outs and check-ins may also be kept.

1.2.1: What was New in SFLM7

Improved performance and bug fixes.

1.2.2: What was New in SFLM6

- Incorporated a web based front end and can use either Netscape or Internet Explorer 6.
- License files are linked to the host. In the case of Windows or RedHat Linux systems, the license file may also be linked to the HASP security key instead. USB HASP keys are supported on Linux. USB and Parallel HASP keys are supported on Windows.
- License files are now linked to information derived from the server machine hardware. This information is sent to the SFLM database through the process of registration and a license file is then generated.
- Supports Multiple Server Redundancy.
- Multiple license servers may now exist on one network and an application may cycle through them to obtain a license.

1.2.3: Supported Platforms

Table 1-1 shows currently supported platforms in SFLM server.

Table 1-1: Supported Platforms for SFLM Server

Platform	Operating System
Sun	SPARC Solaris 9 and 10 (64 bit)
Windows	XP (32-bit OS on 32-bit or 64-bit x86 CPUs)
Linux	Redhat Enterprise 3 and 4 (32-bit or 64 bit OS on 32-bit or 64bit x86 CPU)

SFLM server uses the web browser that is supported on each platform, Internet Explorer (IE) 6.0, and Netscape 4.6.

1.2.4: Installing Software

This section gives an overview of the installation process, which consists of two stages: **License Server Registration** and **License Installation**. You should install software into a single installation directory, which is called `<installdir>`. You may have downloaded the software or received it on a CDROM. You can install multiple versions of the software in the same directory.

Installing on Windows

Software distributed for Windows is in an Install Shield self extracting archive. Run this program and follow directions. If you are installing onto a license server, select **Licensing**. Otherwise, select only the packages you wish to install.

Installing on Unix (Solaris and Red Hat)

These files come in a tar gzip format. First, make a directory `<installdir>` such as `/opts/simucad`. Then, change to that directory. Finally, extract the files using tar and gunzip. For example:

```
mkdir /opt/simucad
cd /opt/simucad
gunzip < /cdrom/sflm.tar.gz | tar xf -
```

1.2.5: License Server Registration

The first stage is called **Registration** (also called **Activation**). It is a means by which a unique description of the machine acting as a license server is generated and saved in the online SFLM database. Chapter 2: “Registration” describes this stage in detail.

Figure 1-1 shows a flowchart of the registration process. After entering a password, the registration process begins and the software gathers information about the customer’s computer (e.g., computer name and hostid). This information together with the user’s name and contact information will be transmitted by way of either http (if online registration is chosen) or by E-mail (if offline registration is chosen) to the license database. Basically, **Registration** is a process that delivers a unique machine ID number to the SFLM database so that a license can be keyed to it.

Note: The online registration requires that the browser is able to access the internet. These are representations of web pages but not their exact content.

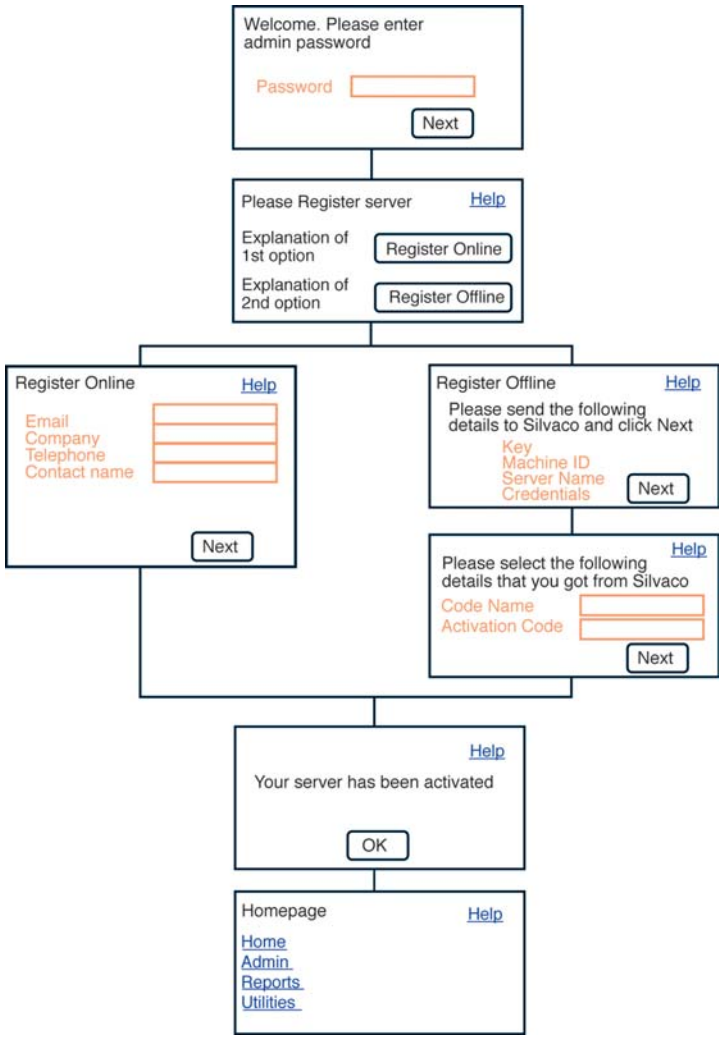

Figure 1-1: SFLM Registration Flowchart

1.2.6: License Installation

When all the registration information is received, a license file will be generated and keyed to your specific machine. You will then be informed by Simucad that the license is ready and can be obtained either automatically or by E-mail. Figure 1-2 shows a flowchart of the licensing process.

The automatic route is the most convenient as SFLM server will contact the online SFLM license database, and request a license to be transmitted through http. This license file will be saved locally on your machine and no further contact will be required.

Note: The automatic update requires that the browser is able to access the internet. These are representations of web pages but not their exact content.

The alternative offline route is to send the license file by E-mail, floppy disk or some other means. You would then use a file browser to find this file and load it with your web browser.

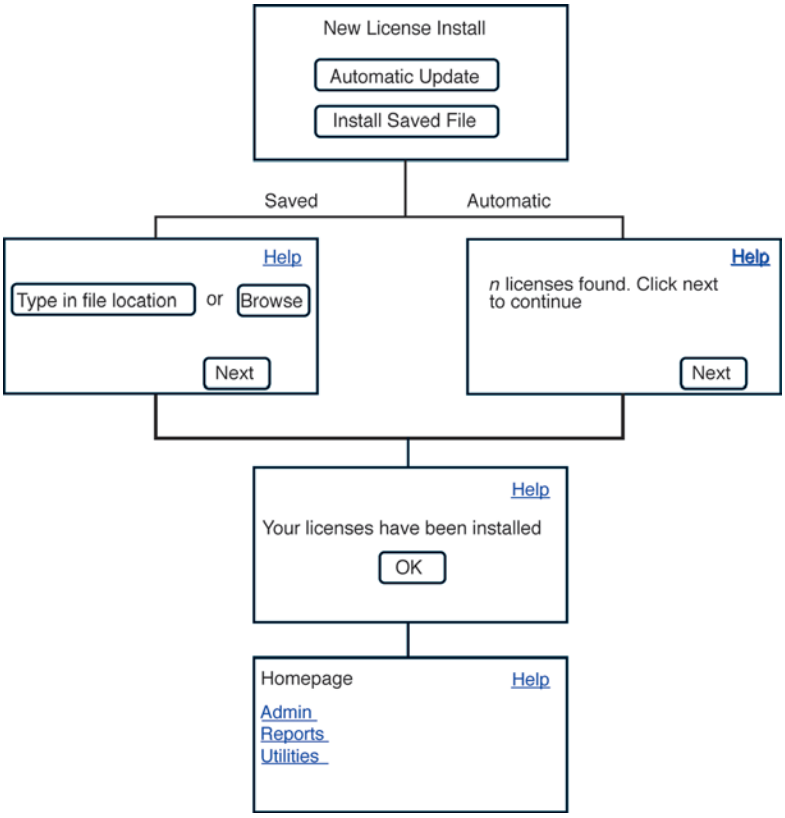

Figure 1-2: SFLM License File(s) Flowchart

The SFLM license server should now be able to issue licenses to applications.

1.2.7: Setting up License Server(s) for Users

Run `sflm_access` to specify license server(s). See Chapter 4: "Specifying the License Server(s) Using SFLM Access" for more details.

1.2.8: Setting up User Environment

On Unix, add /<installdir>/bin to user's path. See Chapter 5: "Customer Environment Settings" for more details.

1.3: Running the Software

To run applications, you must do two things:

- Specify to the license server(s).
- Specify the application you wish to run.

1.3.1: Specifying the License Server(s)

There are two ways to specify license server(s). First, you can specify a list of license servers using sflm_access. That sets the default list of servers used by the applications installed in the same location as the sflm_access program. This is normally done by the person installing the software as other users may have write permission problems to the configuration file (see Section 4.2: "Starting the Server List Configuration Wizard" for more details). Alternatively, you can set the environmental variable SFLM_SERVERS (see Section 5.2.2: "How to Set the SFLM_SERVERS Environment Variable").

1.3.2: Specifying a Path to the Applications.

On Windows, you normally do not specify a path. You simply open up the shortcut screen and double click the application.

On UNIX systems (such as Solaris, Linux and HPUX), each user should add /<installdir>/bin to their path. See Chapter 5: "Customer Environment Settings" for more details.

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2.1: Overview

This chapter describes how to install the SFLM software and how the process of machine registration works using a web browser. This step must be performed by all new users of SFLM server. Figure 2-1 shows how the process of SFLM registration.

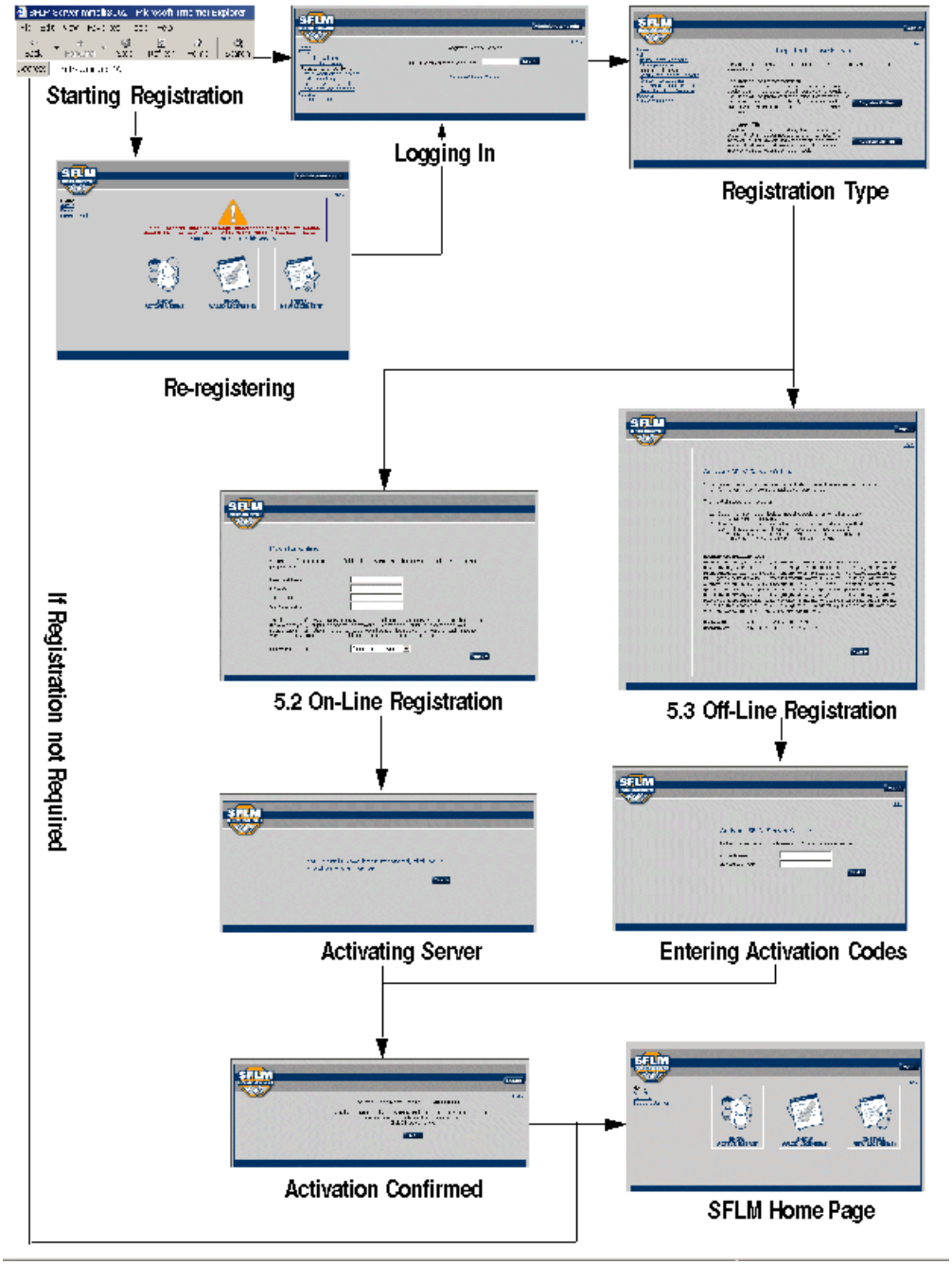

Figure 2-1: SFLM Registration Flow

The first step is to obtain the SFLM software from the software vendor, unpack it onto your machine and install it. Instructions for unpacking the software will be supplied with the software delivery. After unpacking the software, install SFLM on the machine designated as the license server. SFLM server software is included in all baseline release packages. Then, start SFLM server on the license server.

The SFLM installation is performed from a command line on Solaris, HPUX and Linux RedHat operating systems. As the root user, execute the following command:

```
/<installdir>/bin/sflm -install
```

where `<installdir>` is the installation directory where the software was unpackaged.

If you are using a parallel HASP 4 key on a Linux platform, execute:

```
/<installdir>/bin/sflm -install -hasp
```

The `-hasp` option is not required for USB HASP.

On Windows platforms, InstallShield will take care of this first step but you need to have administration rights.

Note: Running the `sflm` command requires root access. Once you run the `sflm -install` command, the server will automatically start when the machine boots up. The rest of the registration may be from a regular user account.

On all platforms, you will be asked to provide a new password. Some of the web pages for SFLM affect how the license server functions. Therefore, you must use give the original password before accessing these functions. All other pages that are standard reports will be accessible to users without this password.

Note: The SFLM password is only for protecting certain SFLM pages. It is not an existing system password.

After installation, bring up a web browser (either Netscape or Internet Explorer) and type in:

```
http://<servername>:3162
```

in the address bar. Here, `<servername>` is the hostname or machine name of the computer where `sflm -install` or InstallShield was run. If you do not know the name of your current machine, you can use the special name `127.0.0.1` instead of `<servername>`. For example, `http://127.0.0.1:3162`.

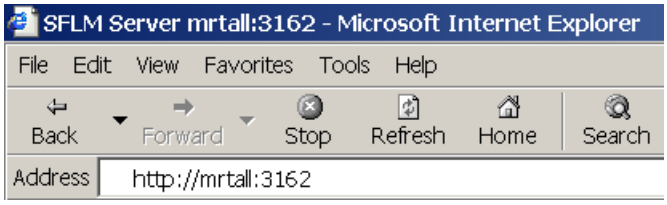
SFLM Server mrtall:3162 - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search
Address http://mrtall:3162

Figure 2-2: Browser showing the special name

Note: The web browser does not need to be run on the license server machine. After the `sflm -install`, you may use any machine to run the browser. The `<servername>`, however, MUST be the machine where `sflm -install` was performed.

When the web browser pops up, it should display a page similar to the one shown in Figure 2-3. This is the beginning of a wizard that will guide you through the process of registration.

At anytime, you can click on **Help** in the browser to provide more information about the current page.

Note: Existing Simucad users can unpack the new SFLM software on top of their existing SFLM4 installation.

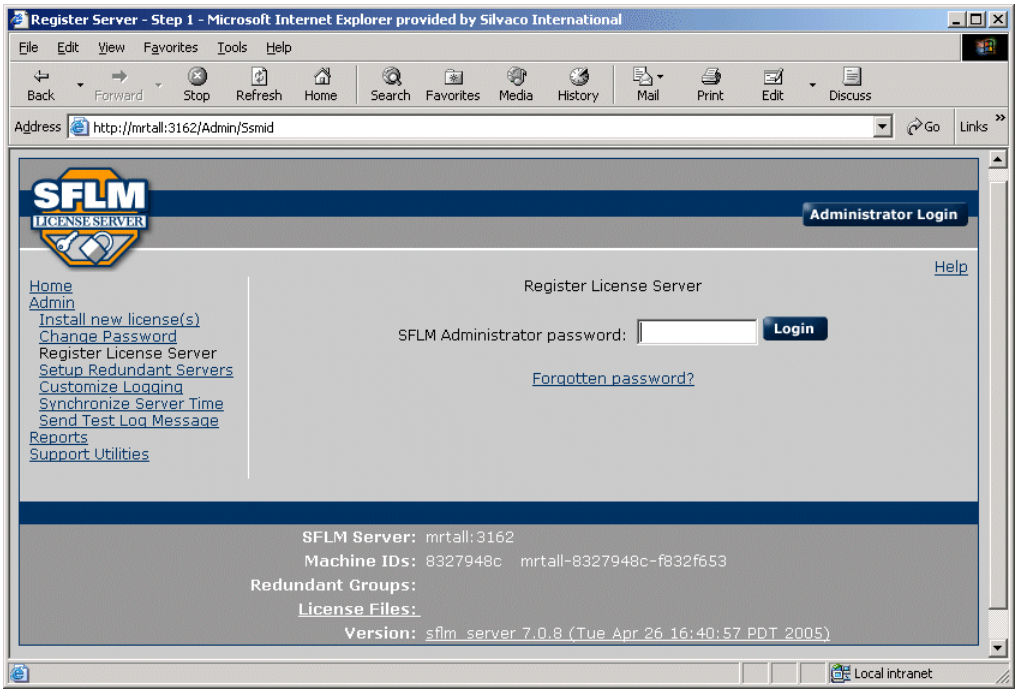

Figure 2-3: Set Password Page

The first step is to enter the SFLM administrator password that was typed in during the initial software installation. After entering the password, the wizard proceeds to the next screen (shown in Figure 2-4) where you decide if they are registering either **Online** or **Offline**. If the machine has access to the internet, we recommend that you choose **Online** registration. You should only choose **Offline** registration if the machine has no access to the internet.

Note: For online registration, it is the machine running the web browser that needs access to the internet, and not the license server where SFLM was installed.

Note: No direct access to the internet is needed. The machine running the browser can reside behind a firewall as long as the proxy configuration is set properly.

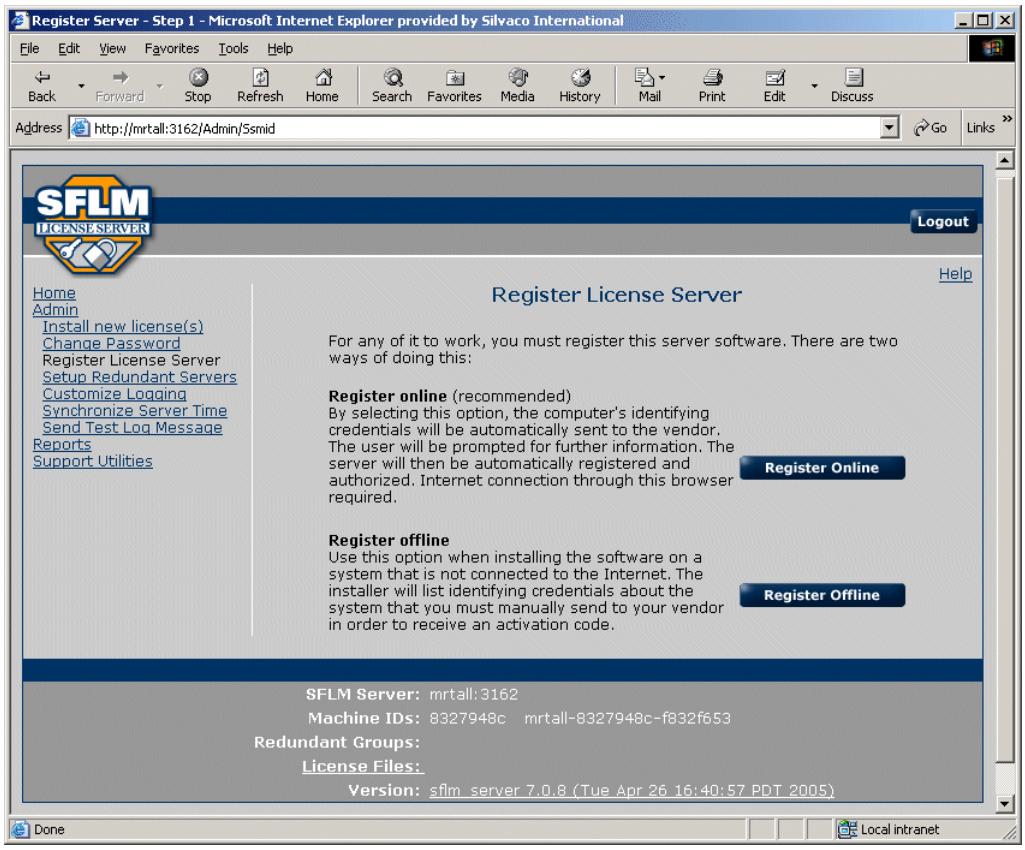
Register Server - Step 1 - Microsoft Internet Explorer provided by Silvaco International
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History Mail Print Edit Discuss
Address http://mrtall:3162/Admin/Ssmid
Go Links
SFLM LICENSE SERVER
Logout
Help
Home
Admin
Install new license(s)
Change Password
Register License Server
Setup Redundant Servers
Customize Logging
Synchronize Server Time
Send Test Log Message
Reports
Support Utilities
Register License Server
For any of it to work, you must register this server software. There are two ways of doing this:
Register online (recommended)
By selecting this option, the computer's identifying credentials will be automatically sent to the vendor. The user will be prompted for further information. The server will then be automatically registered and authorized. Internet connection through this browser required.
Register Online
Register offline
Use this option when installing the software on a system that is not connected to the Internet. The installer will list identifying credentials about the system that you must manually send to your vendor in order to receive an activation code.
Register Offline
SFLM Server: mrtall:3162
Machine IDs: 8327948c mrtall-8327948c-f832f653
Redundant Groups:
License Files:
Version: sflm_server 7.0.8 (Tue Apr 26 16:40:57 PDT 2005)
Done
Local intranet

Figure 2-4: Register License Server Page

2.2: Online Registration

When you choose **Online** registration, the next web page in the installation will appear (Figure 2-5). You must to fill out all 4 fields on this page. Then, select the appropriate vendor name from the software vendor list at the bottom of the web page.

At this point, the SFLM server will also have gathered together the set of machine credentials that will uniquely describe the server machine. If you click the **Next** button, all this information will be transmitted to the central SFLM database automatically by way of http. This information shall be used to generate the customer's license file and to send it to the appropriate E-mail address. All information is strictly confidential and secure.

Note: Online registration is available only if the browser can access pages on the internet.

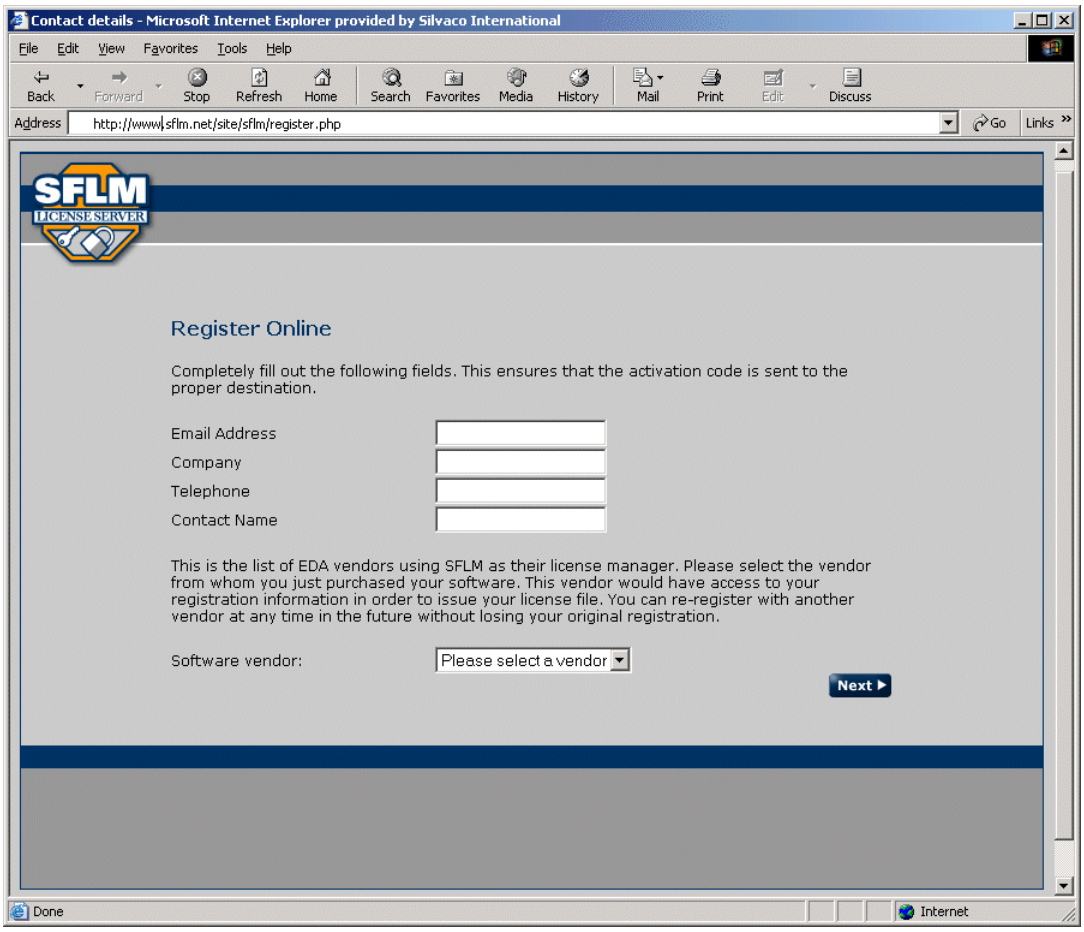
Contact details - Microsoft Internet Explorer provided by Silvaco International
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History Mail Print Edit Discuss
Address http://www.sflm.net/site/sflm/register.php
Go Links
SFLM
LICENSE SERVER
Register Online
Completely fill out the following fields. This ensures that the activation code is sent to the proper destination.
Email Address
Company
Telephone
Contact Name
This is the list of EDA vendors using SFLM as their license manager. Please select the vendor from whom you just purchased your software. This vendor would have access to your registration information in order to issue your license file. You can re-register with another vendor at any time in the future without losing your original registration.
Software vendor:
Please select a vendor
Next
Done
Internet

Figure 2-5: Register Online Page

If you complete this page correctly, the Activate Server Page will appear (Figure 2-6). By clicking **Next** on this page, you will complete the process of registration, and should show the Registration Complete Page (Figure 2-7). The server **Code Name** is the equivalent hostid of the server machine that will appear in your license file.

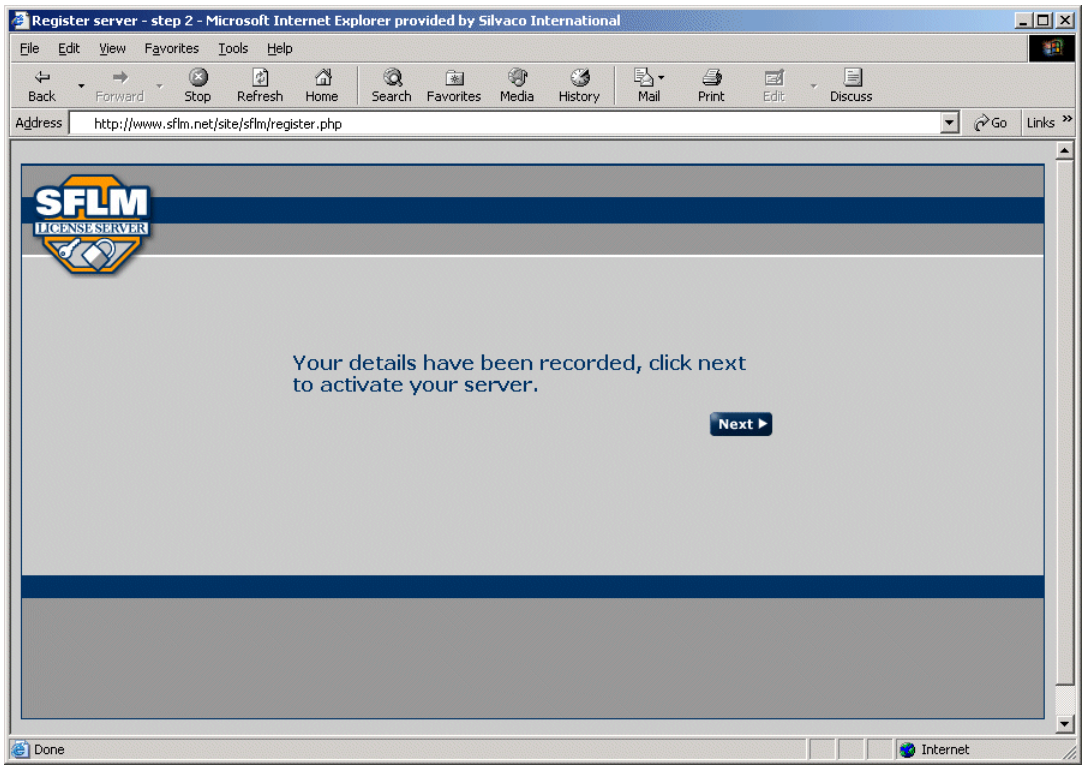
Register server - step 2 - Microsoft Internet Explorer provided by Silvaco International
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History Mail Print Edit Discuss
Address http://www.sflm.net/site/sflm/register.php
Go Links
SFLM
LICENSE SERVER
Your details have been recorded, click next to activate your server.
Next
Done
Internet

Figure 2-6: Activate Server Page

Registration is not yet complete. You must click the **Next** button to send the activation code to the server.

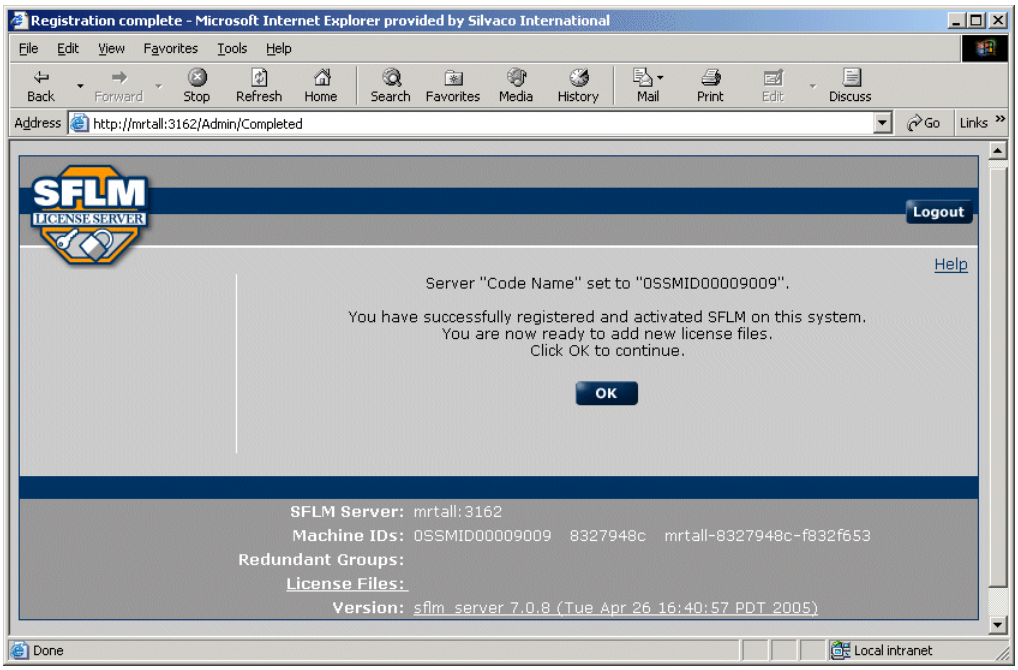
Registration complete - Microsoft Internet Explorer provided by Silvaco International
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History Mail Print Edit Discuss
Address http://mrtall:3162/Admin/Completed
Go Links
SFLM
LICENSE SERVER
Logout
Help
Server "Code Name" set to "0SSMID00009009".
You have successfully registered and activated SFLM on this system.
You are now ready to add new license files.
Click OK to continue.
OK
SFLM Server: mrtall:3162
Machine IDs: 0SSMID00009009 8327948c mrtall-8327948c-f832f653
Redundant Groups:
License Files:
Version: sflm_server 7.0.8 (Tue Apr 26 16:40:57 PDT 2005)
Done
Local intranet

Figure 2-7: Registration Complete Page

Registration is now complete and a page similar to Figure 2-8 will appear when you click on **OK**. You will now wait until the software vendor informs you that a license file(s) is ready to be retrieved.

Figure 2-8: Main SFLM Home Page

2.3: Offline Registration

When you choose an **Offline** registration, we must assume that you cannot access the web from the server machine or from any other machine on the network. If you click on **Offline** registration, the Offline Registration Page will appear (Figure 2-9).

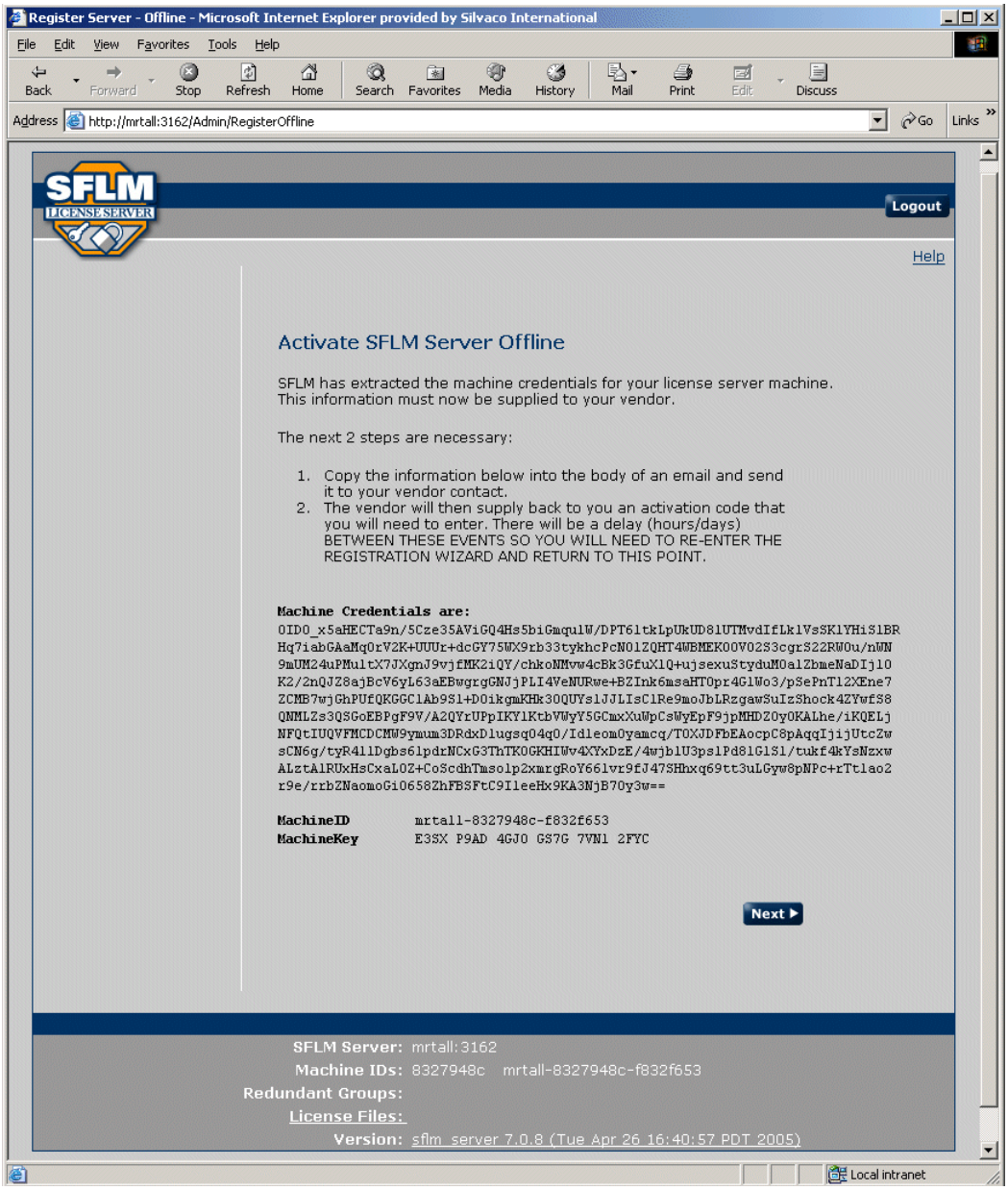
Register Server - Offline - Microsoft Internet Explorer provided by Silvaco International
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History Mail Print Edit Discuss
Address http://mrtall:3162/Admin/RegisterOffline
Go Links
SFLM LICENSE SERVER
Logout
Help
Activate SFLM Server Offline
SFLM has extracted the machine credentials for your license server machine.
This information must now be supplied to your vendor.
The next 2 steps are necessary:
1. Copy the information below into the body of an email and send it to your vendor contact.
2. The vendor will then supply back to you an activation code that you will need to enter. There will be a delay (hours/days) BETWEEN THESE EVENTS SO YOU WILL NEED TO RE-ENTER THE REGISTRATION WIZARD AND RETURN TO THIS POINT.
Machine Credentials are:
0ID0_x5aHECTa9n/5Cze35AViGQ4Hs5biGmqulW/DPT6ltkLpUkUD8lUTMvdIfLklVsSKlYHiSlBR
Hq7iabGAaMq0rV2K+UUUr+dcGY75WX9rb33tykhcPcN0lZQHT4WBMEKO0V0283cgrS22RW0u/nWN
9mUM24uPMultX7JXgnJ9vjfMK2iQY/chkoNMvw4cBk3GfuXlQ+ujsexuStyduM0alZbmeNaDIjl0
K2/2nQJZ8ajBcV6yL63aEBwgrgGNJjPLI4VeNURwe+BZInk6msaHTOpr4GlWo3/pSePnTl2XEne7
ZCMB7wjGhPUfQKGGClAb9Sl+D0ikgmKHk30QUYslJLIsClRe9moJbLRzgawSuIzShock4ZYwfS8
QNMLZs3QSGoEBPgF9V/A2QYrUPpIKYlKtbVWyY5GCmxXuWpCsWyEpF9jpMHDZOy0KALhe/iKQELj
NFQtIUQVFMCDCMW9ymum3DRdxDlugsq04q0/IdleomOyamcq/TOXJDFbEAocpC8pAqqIjijUtcZw
sCN6g/tyR4llDgbs6lpdrNCxG3ThTKOGKHIWv4XYxDzE/4wjblU3pslPd8lGlSl/tukf4kYsNzxw
ALztAlRUxHsCxaLOZ+CoScdhTmsolp2xmrgRoY66lvr9fJ47SHhxq69tt3uLGyw8pNPc+rTtlao2
r9e/rrbZNaomoGi0658ZhFBSFtC9IleeHx9KA3NjB70y3w==
MachineID mrtall-8327948c-f832f653
MachineKey E3SX P9AD 4GJ0 GS7G 7VN1 2FYC
Next
SFLM Server: mrtall:3162
Machine IDs: 8327948c mrtall-8327948c-f832f653
Redundant Groups:
License Files:
Version: sflm_server 7.0.8 (Tue Apr 26 16:40:57 PDT 2005)
Local intranet

Figure 2-9: Offline Registration Page

You must take the Machine Credentials, MachineID and MachineKey information and send it to your software vendor. You can send them by by E-mail (if by E-mail, send it to the vendor account manager), floppy disk, and so forth.

For example, the key parts of the page shown in Figure 2-9 that must be sent are the following.

```
Machine Credentials are:
0ID0_x5aHECTa9n/5Cze35AViGQ4Hs5biGmqulW/DPT61tkLpUkUD81UTMvdIfLklVsSKlYHiSlBR
Hq7iabGAaMq0rV2K+UUUr+dcGY75WX9rb33tykhcPcNO1ZQHT4WBMEKO0VO2S3cgrS22RWOu/nWN
9mUM24uPMu1tX7JXgnJ9vjfMK2iQY/chkoNMvw4cBk3GfuXlQ+ujsexuStyduM0a1ZbmeNaDIjl0
K2/2nQJZ8ajBcV6yL63aEBwgrgGNJjPLI4VeNURwe+BZInk6msaHTOpr4G1Wo3/pSePnTl2XEne7
ZCMB7wjGhPUfQKGGC1Ab9Sl+DOikgmKHk3OQUYs1JJLIsC1Re9moJbLRzgawSuIzShock4ZYwfS8
QNMLZs3QSGoEBPgF9V/A2QYrUPpIKYlKtbVWyY5GCmxXuWpCsWyEpF9jpMHDZOy0KALhe/iKQELj
NFQtIUQVFMCDCMW9ymum3DRdxD1ugsq04qO/Id1eomOyamcq/T0XJDFbEAocpC8pAqqIjijUtcZw
sCN6g/tyR4llDgbs61pdrNCxG3ThTKOGKHIWv4XYxDzE/4wjb1U3ps1Pd81G1Sl/tukf4kYsNzxw
ALztA1RUxHsCxaLOZ+CoScdhTmsolp2xmrgRoY661vr9fJ47SHhxq69tt3uLGyw8pNPc+rTt1ao2
r9e/rrbZNaomoGiO658ZhFBSFtC9I1eeHx9KA3NjB70y3w==

MachineID        mrtall-8327948c-f832f653
MachineKey       E3SX P9AD 4GJ0 GS7G 7VN1 2FYC
```

At this point, if you click on **Next**, the Code Name and Activation Code Page (Figure 2-10) will appear but cannot be completed. The **Code Name** and **Activation Code** will be issued on receipt of the registration data above. When you receive this information, return to the Offline Registration Page and enter the **Code Name** and **Activation Code**.

You can return to this page any time by opening the main SFLM home page (http://servername:3162), clicking on **Admin**, **Re-register License Server**, **Register Offline**, and finally **Next**.

When you enter the **Code Name** and **Activation Code**, you will see the Registration Complete Page (Figure 2-7) that lets you know the activation was successful. Click **OK** on this screen to complete the SFLM activation. The SFLM system is now ready to accept license files.

In response to your E-mail, you will receive a message like the following.

```
CodeName         0SSMID00009009
ActivationCode   1234 ABCD 5678 EFGH
MachineID        mrtall-8327948c-f832f653
MachineKey       E3SX P9AD 4GJ0 GS7G 7VN1 2FYC
```

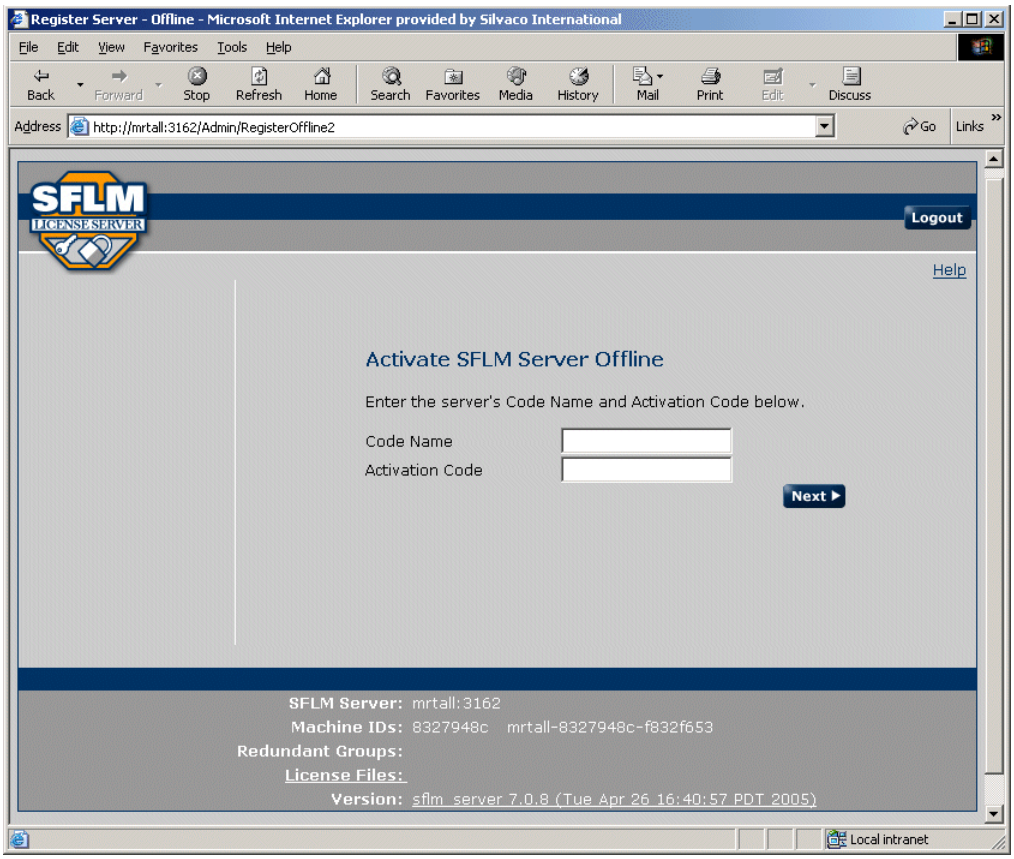
Register Server - Offline - Microsoft Internet Explorer provided by Silvaco International
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History Mail Print Edit Discuss
Address http://mrtall:3162/Admin/RegisterOffline2
Go Links
SFLM LICENSE SERVER
Logout
Help
Activate SFLM Server Offline
Enter the server's Code Name and Activation Code below.
Code Name
Activation Code
Next
SFLM Server: mrtall:3162
Machine IDs: 8327948c mrtall-8327948c-f832f653
Redundant Groups:
License Files:
Version: sflm_server 7.0.8 (Tue Apr 26 16:40:57 PDT 2005)
Local intranet

Figure 2-10: Code Name and Activation Code Page

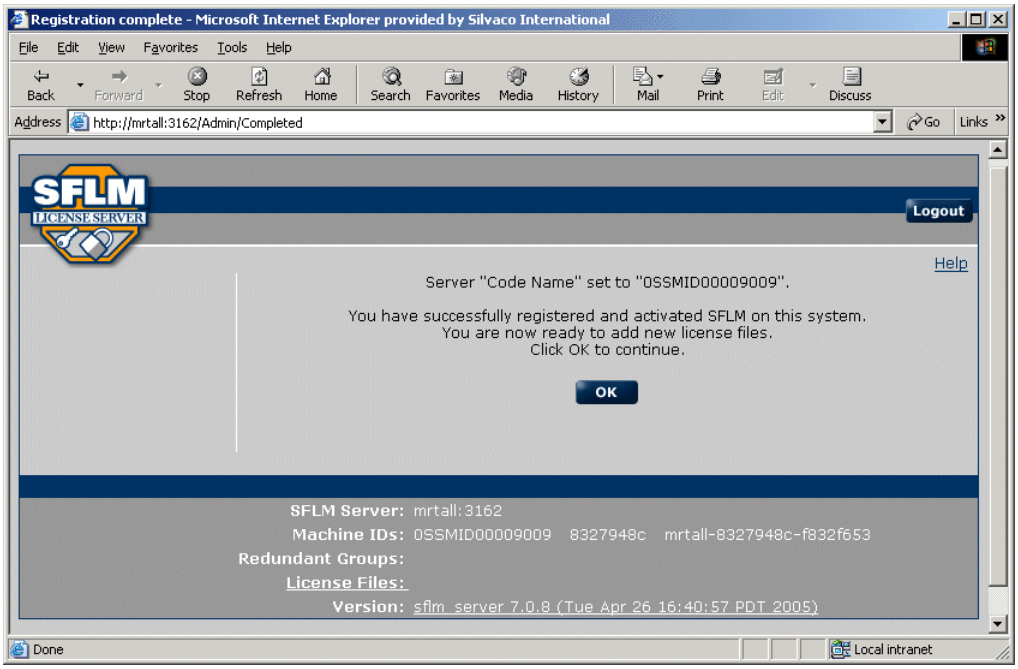
Registration complete - Microsoft Internet Explorer provided by Silvaco International
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History Mail Print Edit Discuss
Address http://mrtall:3162/Admin/Completed
Go Links
SFLM LICENSE SERVER
Logout
Help
Server "Code Name" set to "OSSMID00009009".
You have successfully registered and activated SFLM on this system.
You are now ready to add new license files.
Click OK to continue.
OK
SFLM Server: mrtall:3162
Machine IDs: OSSMID00009009 8327948c mrtall-8327948c-f832f653
Redundant Groups:
License Files:
Version: sflm_server 7.0.8 (Tue Apr 26 16:40:57 PDT 2005)
Done
Local intranet

Figure 2-11: Registration Complete Page

Registration is now complete and a page similar to Figure 2-12 will appear when you click on **OK**.

Figure 2-12: Main SFLM Home Page

This page is intentionally left blank.

Chapter 3:
License Installation

3.1: Overview

After completing registration successfully, the software vendor will inform you that a license file is ready. Figure 3-1 shows the process of installing the SFLM License.

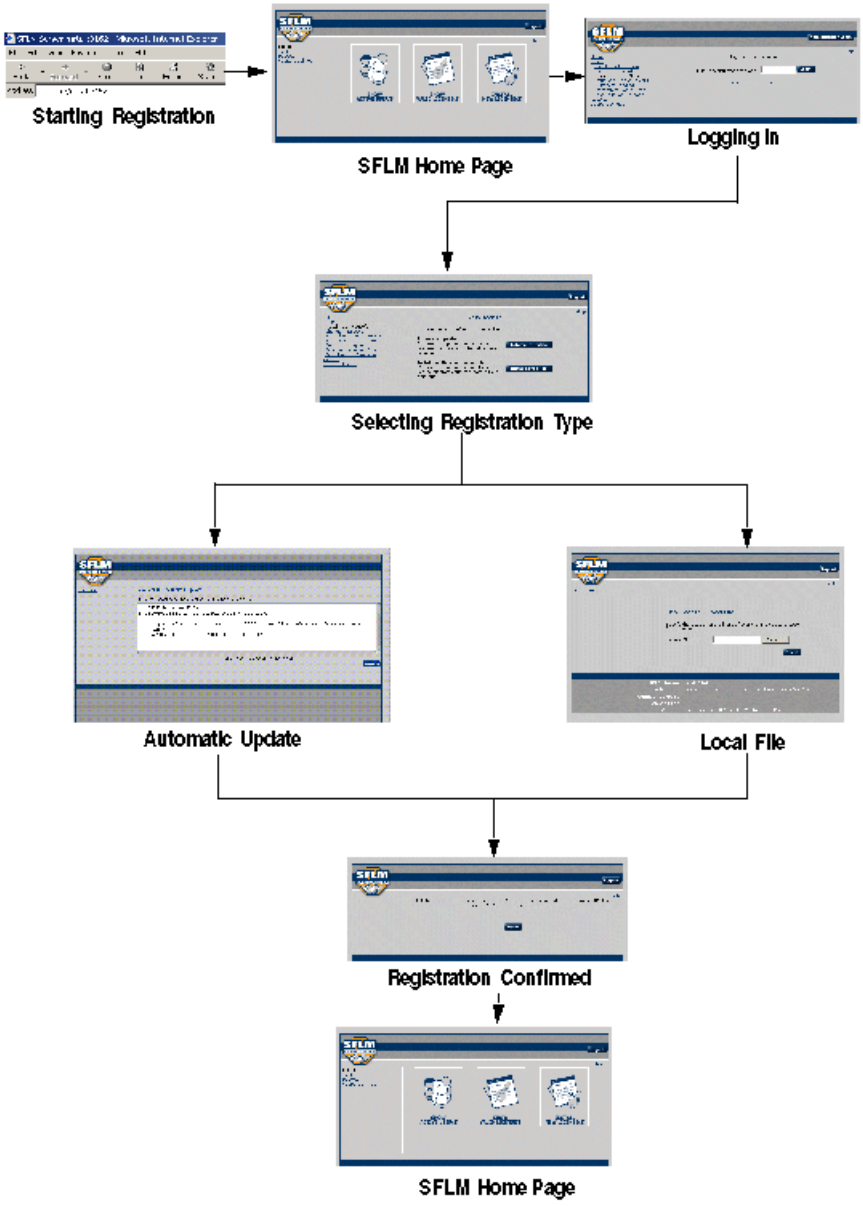

Figure 3-1: SFLM License Installation Flow

You can obtain the license file from our **Automatic update** feature or receive the license as an E-mail attachment. In either case, you should then return to their web browser and open:

```
http://<servername>:3162
```

Click on the **Install New License(s)** option (shown in Figure 5-8) to display Figure 3-2. In this screen, you can choose the **Automatic Update** or an **Install Saved File** options.

Figure 3-2: Install New License Page

3.2: Automatic Update

This option will download your license file directly from the web. When you click on this button the Automatic Update Page (Figure 3-3) will appear. If you accept this, then the Automatic Update Accepted Page (Figure 3-4) will appear. Once this is complete, the server will be able to distribute licenses. By returning to the Home page (shown in Figure 2-8) and clicking on **Show Valid License(s)**, a list of all available licenses will be displayed.

Note: The Automatic upload is available only if the browser can access pages on the internet.

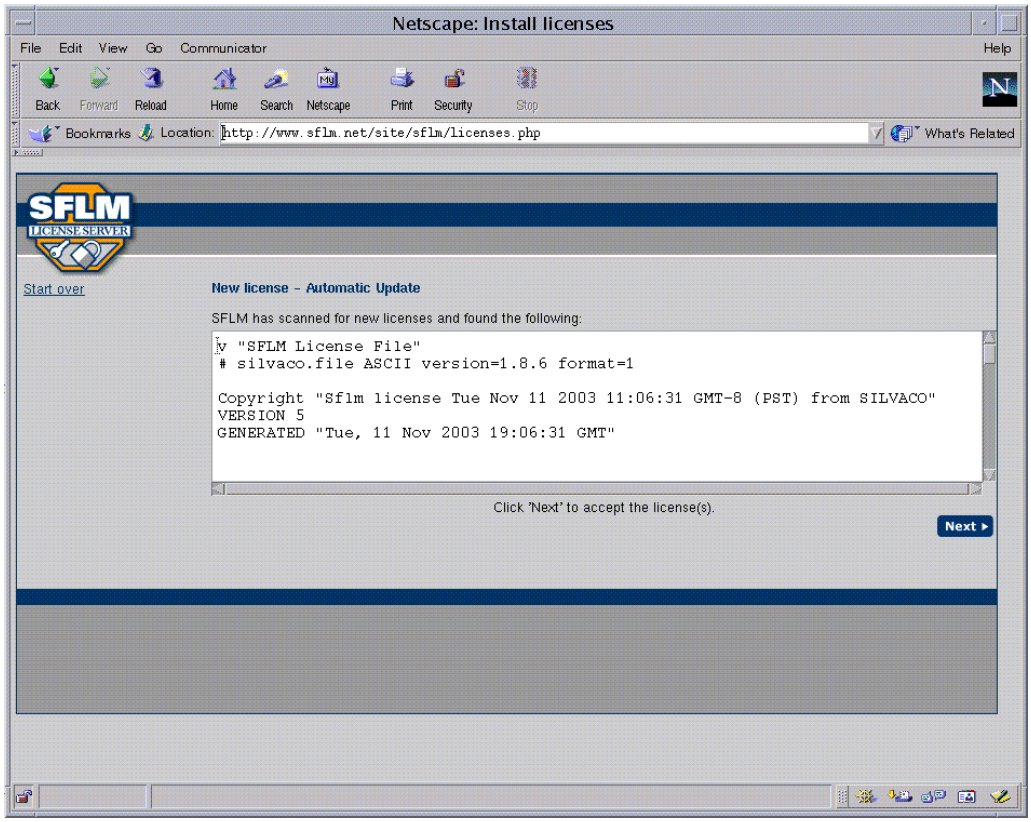
Netscape: Install licenses
File Edit View Go Communicator Help
Back Forward Reload Home Search Netscape Print Security Stop
Bookmarks Location: http://www.sflm.net/site/sflm/licenses.php What's Related
SFLM
LICENSE SERVER
Start over
New license - Automatic Update
SFLM has scanned for new licenses and found the following:
v "SFLM License File"
silvaco.file ASCII version=1.8.6 format=1
Copyright "Sflm license Tue Nov 11 2003 11:06:31 GMT-8 (PST) from SILVACO"
VERSION 5
GENERATED "Tue, 11 Nov 2003 19:06:31 GMT"
Click "Next" to accept the license(s).
Next ▸

Figure 3-3: Automatic Update Page

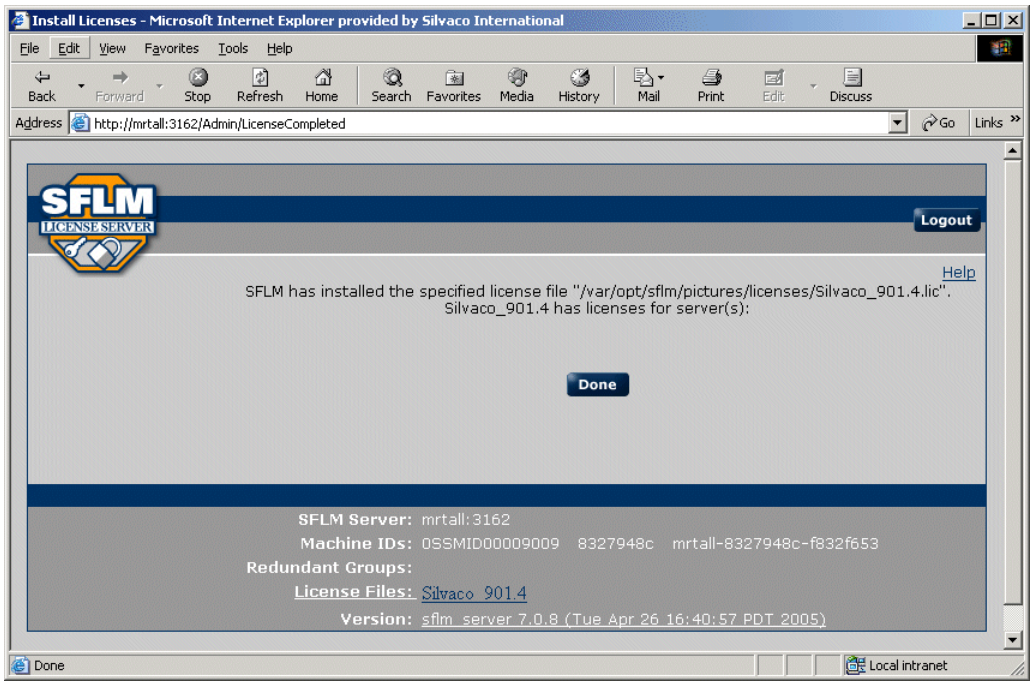
Install Licenses - Microsoft Internet Explorer provided by Silvaco International
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History Mail Print Edit Discuss
Address http://mrtall:3162/Admin/LicenseCompleted
Go Links
SFLM
LICENSE SERVER
Logout
Help
SFLM has installed the specified license file "/var/opt/sflm/pictures/licenses/Silvaco_901.4.lic".
Silvaco_901.4 has licenses for server(s):
Done
SFLM Server: mrtall:3162
Machine IDs: OSSMID00009009 8327948c mrtall-8327948c-f832f653
Redundant Groups:
License Files: Silvaco_901.4
Version: sflm_server 7.0.8 (Tue Apr 26 16:40:57 PDT 2005)
Done
Local intranet

Figure 3-4: Automatic Update Accepted Page

3.3: Install Locally Saved License File

This option is designed if you had to register your machine offline. Typically, you would be sent a license by E-mail or floppy disk, which should be saved to your hard disk. Clicking on this option will open the Install Locally Saved License File Page (Figure 3-5) where you will be asked to browse to the saved file and load it.

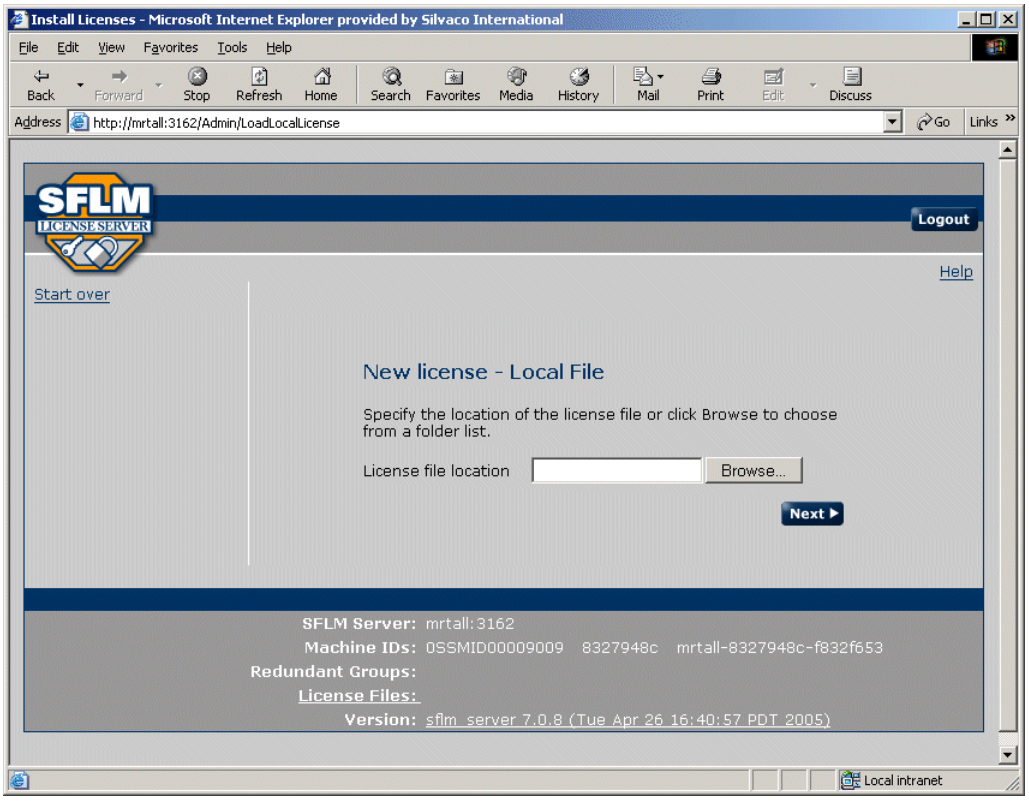
Install Licenses - Microsoft Internet Explorer provided by Silvaco International
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History Mail Print Edit Discuss
Address http://mrtall:3162/Admin/LoadLocalLicense
Go Links
SFLM
LICENSE SERVER
Logout
Help
Start over
New license - Local File
Specify the location of the license file or click Browse to choose from a folder list.
License file location
Browse...
Next
SFLM Server: mrtall:3162
Machine IDs: OSSMID00009009 8327948c mrtall-8327948c-f832f653
Redundant Groups:
License Files:
Version: sflm_server 7.0.8 (Tue Apr 26 16:40:57 PDT 2005)
Local intranet

Figure 3-5: Install Locally Saved License File Page

Once you find the license file, click **Next** to load it. If the license file is valid, the following confirmation page will appear (Figure 3-6). Otherwise, an error message will appear.

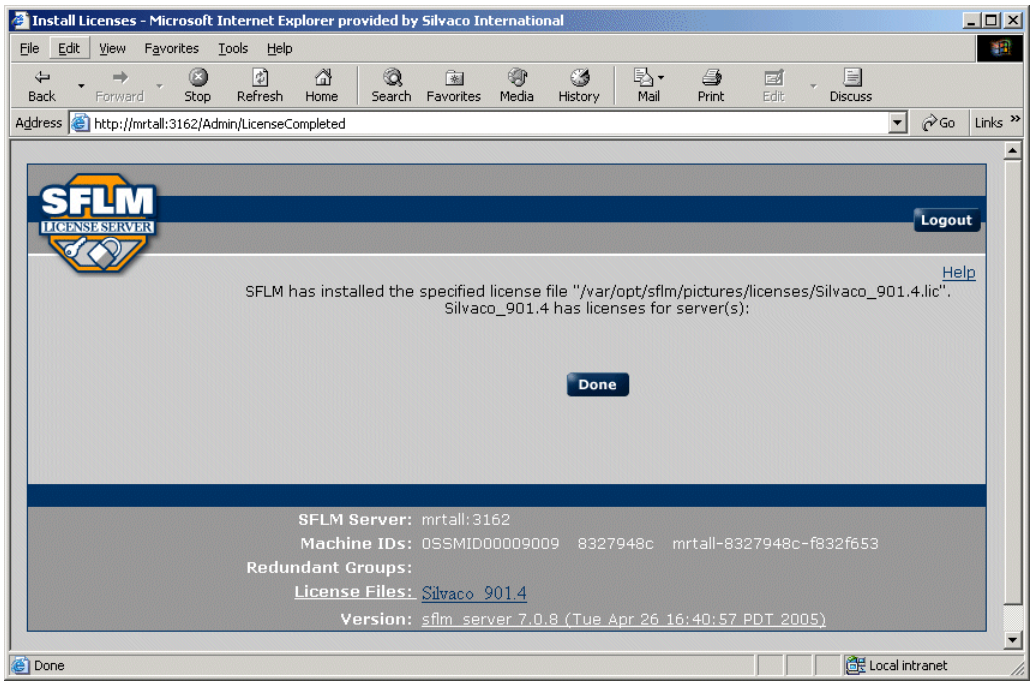
Install Licenses - Microsoft Internet Explorer provided by Silvaco International
File Edit View Favorites Tools Help
Back Forward Stop Refresh Home Search Favorites Media History Mail Print Edit Discuss
Address http://mrtall:3162/Admin/LicenseCompleted
Go Links
SFLM
LICENSE SERVER
Logout
Help
SFLM has installed the specified license file "/var/opt/sflm/pictures/licenses/Silvaco_901.4.lic".
Silvaco_901.4 has licenses for server(s):
Done
SFLM Server: mrtall:3162
Machine IDs: OSSMID00009009 8327948c mrtall-8327948c-f832f653
Redundant Groups:
License Files: Silvaco_901.4
Version: sflm_server 7.0.8 (Tue Apr 26 16:40:57 PDT 2005)
Done
Local intranet

Figure 3-6: License Update Accepted Page

Once this is complete, the server will be able to distribute licenses. By returning to the Home page (shown in Figure 5-8) and clicking on **Show Valid License(s)**, a list of all available licenses will be displayed.

Chapter 4:
Specifying the License Server(s) Using SFLM Access

4.1: Overview

There are two ways to specify which license server(s) to use. First, you can specify a list of license servers using `sflm_access`, which sets the default list of servers used by the applications installed in the same location as the `sflm_access` program. This is normally done by the person installing the software as other users may have write permission problems to the configuration file.

Alternatively, you can set the environmental variable `SFLM_SERVERS`, which is described in Chapter 5: "Customer Environment Settings", Section 5.2.2: "How to Set the SFLM_SERVERS Environment Variable".

4.1.1: Starting SFLM Access

On Windows, open the **Shortcuts** window and double-click on the **SFLM Access** icon.

On UNIX systems, like Solaris, Linux and HPUX, run the command:

```
/<installdir>/bin/sflm_access
```

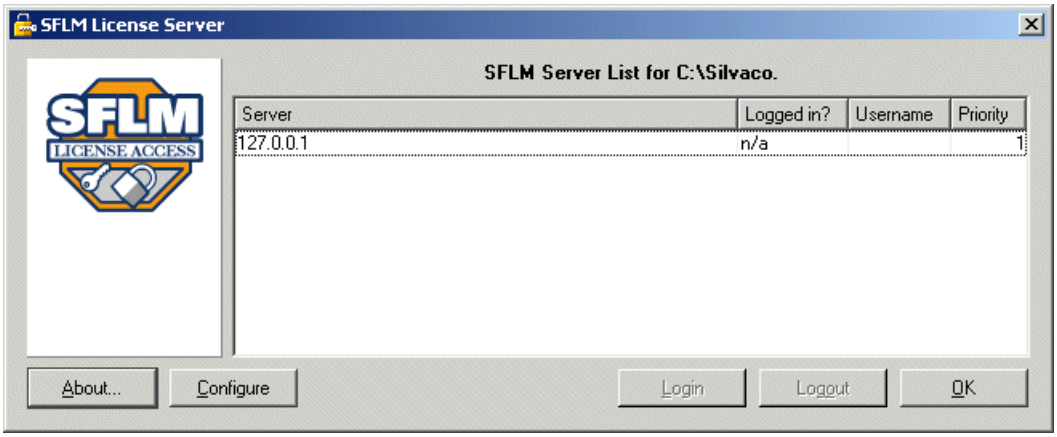

Figure 4-1: Current List of Servers

This shows the current list of license servers to use.

4.2: Starting the Server List Configuration Wizard

Click on the **Configure** button. If this button is not highlighted and the current list is not right, you may need to change to the administrative user (root on UNIX) or to a user that has write permission to `/<installdir>/bin/sflm_access.cf`. Do not edit this file manually, always use `sflm_access`.

When you press **Configure**, the following window appears.

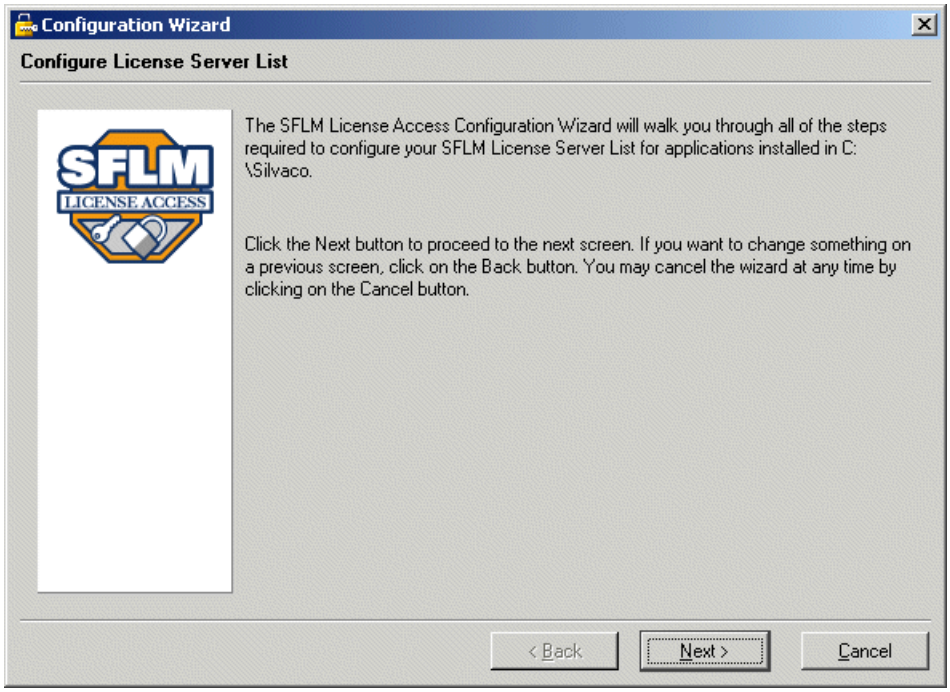
Configuration Wizard
Configure License Server List
SFLM
LICENSE ACCESS
The SFLM License Access Configuration Wizard will walk you through all of the steps required to configure your SFLM License Server List for applications installed in C:\Silvaco.
Click the Next button to proceed to the next screen. If you want to change something on a previous screen, click on the Back button. You may cancel the wizard at any time by clicking on the Cancel button.
< Back
Next >
Cancel

Figure 4-2: Configure License Server List

Press **Next** to go to the next step.

4.3: Choosing Configuration Action

This screen allows four different actions. Each action must be finished or cancelled before proceeding to a different action.

1. **Add a new server** (to the list of servers to check for licenses). See 4.4.1: “Adding a Server - Local / Network” on page 4-5 for more details.
2. **Define the order of the existing servers**. This changes the order in which the servers try to obtain a license. The first server grants the license. At that time, all servers will then be searched in order for a license.
3. **Modify an existing server**. This allows you to change the name, or other information, of an existing server. It also allows you to change the order of a redundant server cluster.
4. **Remove an existing server** (from the list of license servers used to obtain a license).

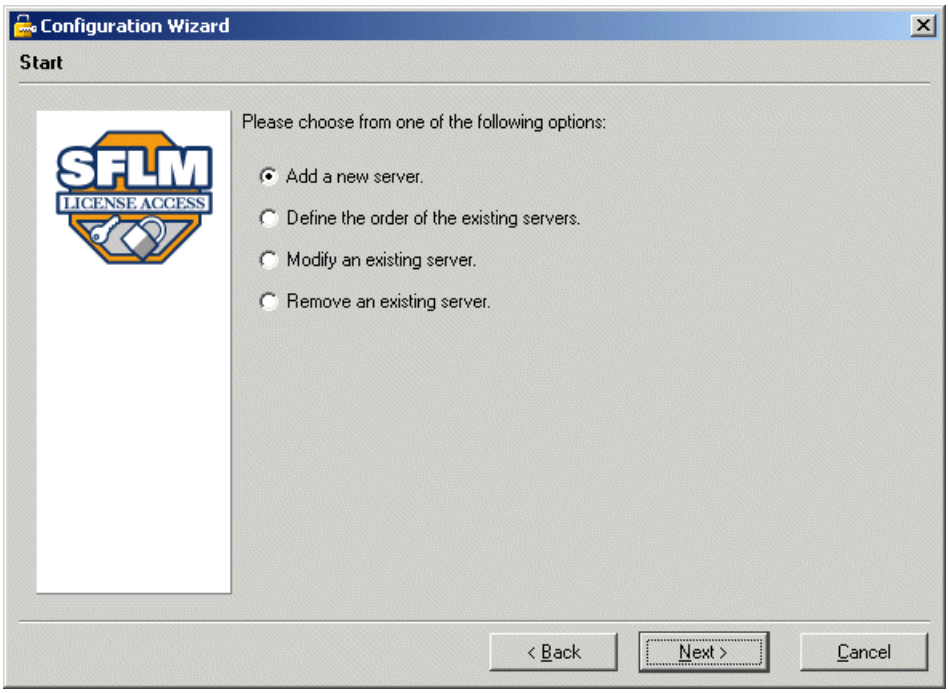

Figure 4-3: Adding a New Server

4.4: Adding a Server

Choose a server type:

- **Local / Network** (see 4.4.1: "Adding a Server - Local / Network" on page 4-5)
- **Internet** (see 4.4.2: "Adding a Server - Internet (Online Billing Service)" on page 4-6)
- **Redundant** (see 4.4.4: "Adding a Server - Redundant" on page 4-8)

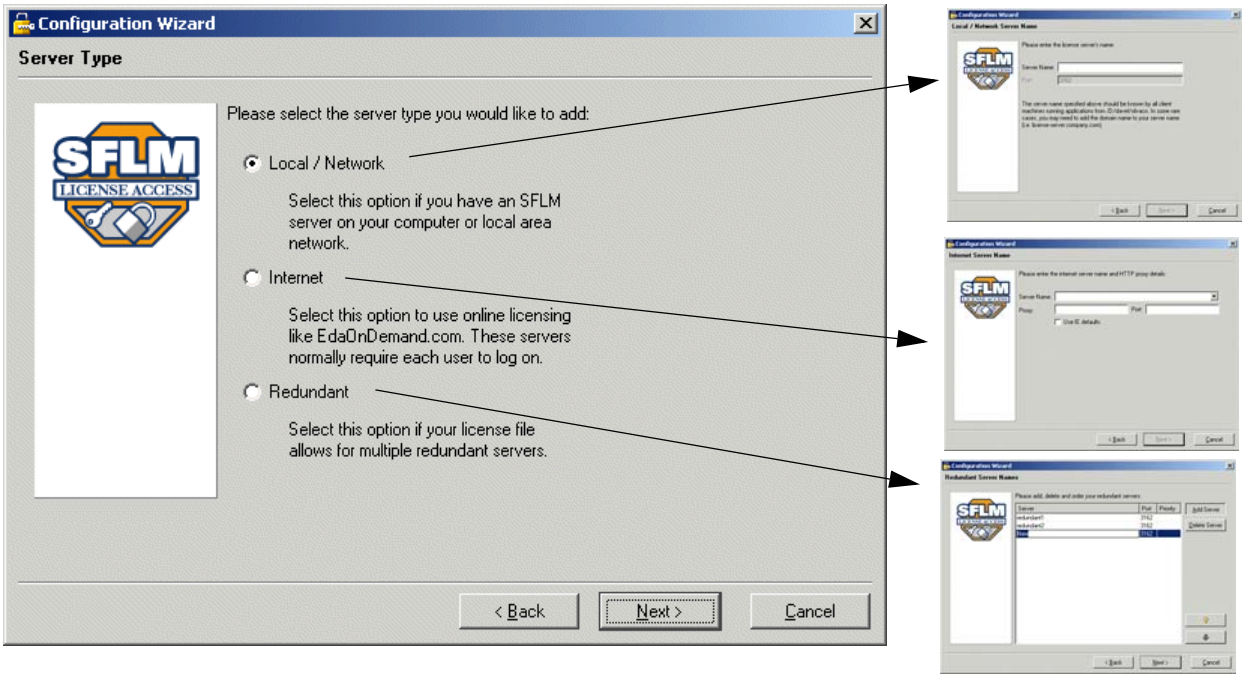
Configuration Wizard
Server Type
Please select the server type you would like to add:
Local / Network
Select this option if you have an SFLM server on your computer or local area network.
Internet
Select this option to use online licensing like EdaOnDemand.com. These servers normally require each user to log on.
Redundant
Select this option if your license file allows for multiple redundant servers.
< Back
Next >
Cancel

Figure 4-4: Server Types

4.4.1: Adding a Server - Local / Network

This is the normal case of a standard server. Simply specify the name of the server (such as `mrtall`), press **Next**, rearrange the server order (if needed) and click **Finished**. See Figures 4-5 and 4-6.

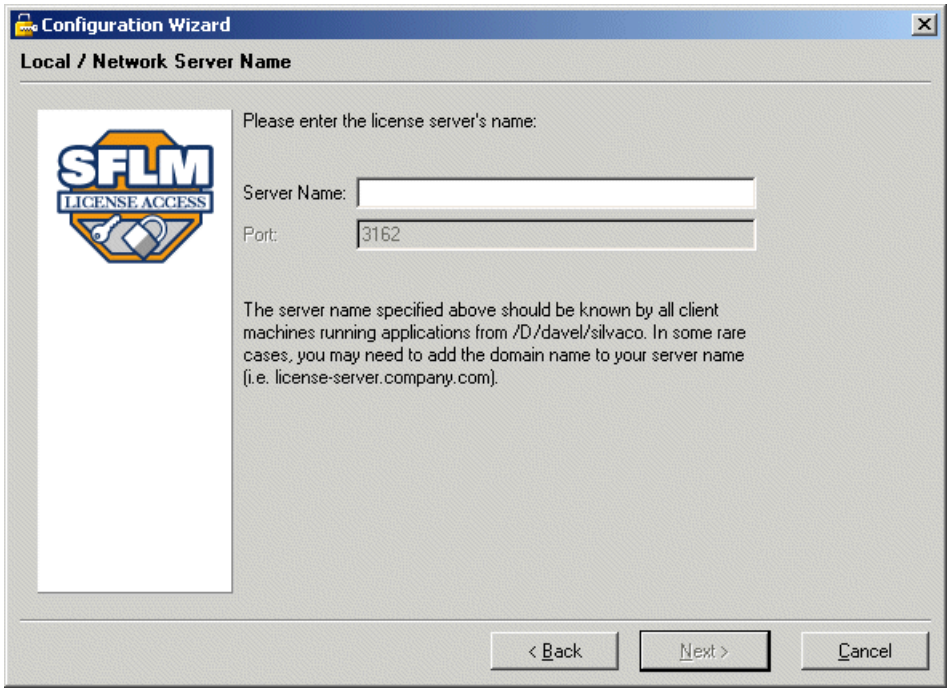
Configuration Wizard
Local / Network Server Name
Please enter the license server's name:
Server Name:
Port:
3162
The server name specified above should be known by all client machines running applications from /D/davel/silvaco. In some rare cases, you may need to add the domain name to your server name (i.e. license-server.company.com).
< Back
Next >
Cancel

Figure 4-5: Adding a Server - Local / Network

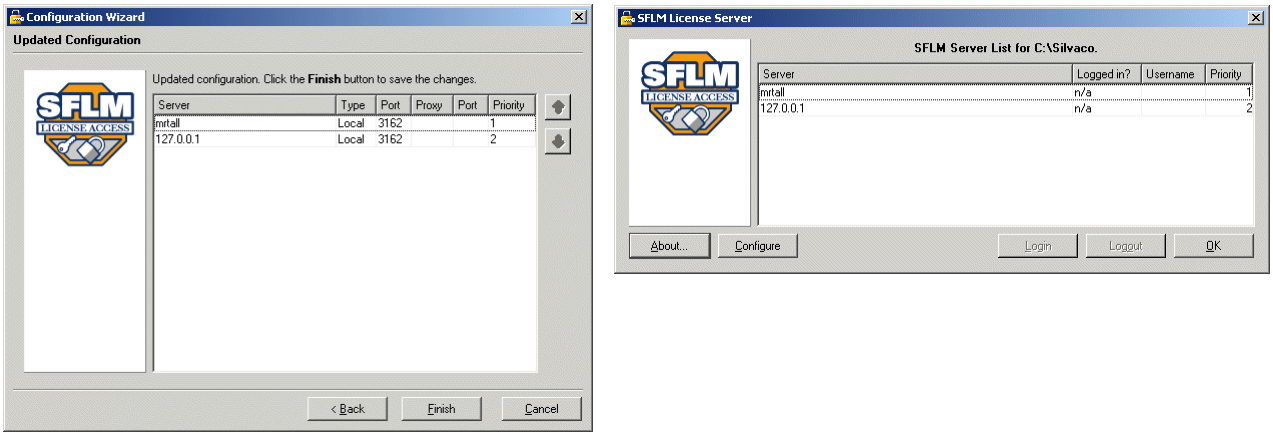

Figure 4-6: Server List

4.4.2: Adding a Server - Internet (Online Billing Service)

This option is used when you have an online billing service, such as EDAonDemand.com. Choose your billing service from the pulldown list (by clicking the box) or by typing in the server name. If you connect through a firewall, you may need to specify your http proxy and port number. Leave these fields blank if you are directly connected to the internet. If your Internet Explorer is configured to use an http proxy, this setting can be read by checking the **Use IE defaults** box. Click **Next** and arrange the order of the servers. Normally, the internet server should be the last (and only) server in the list. Click **Finish** to complete the adding of this server.

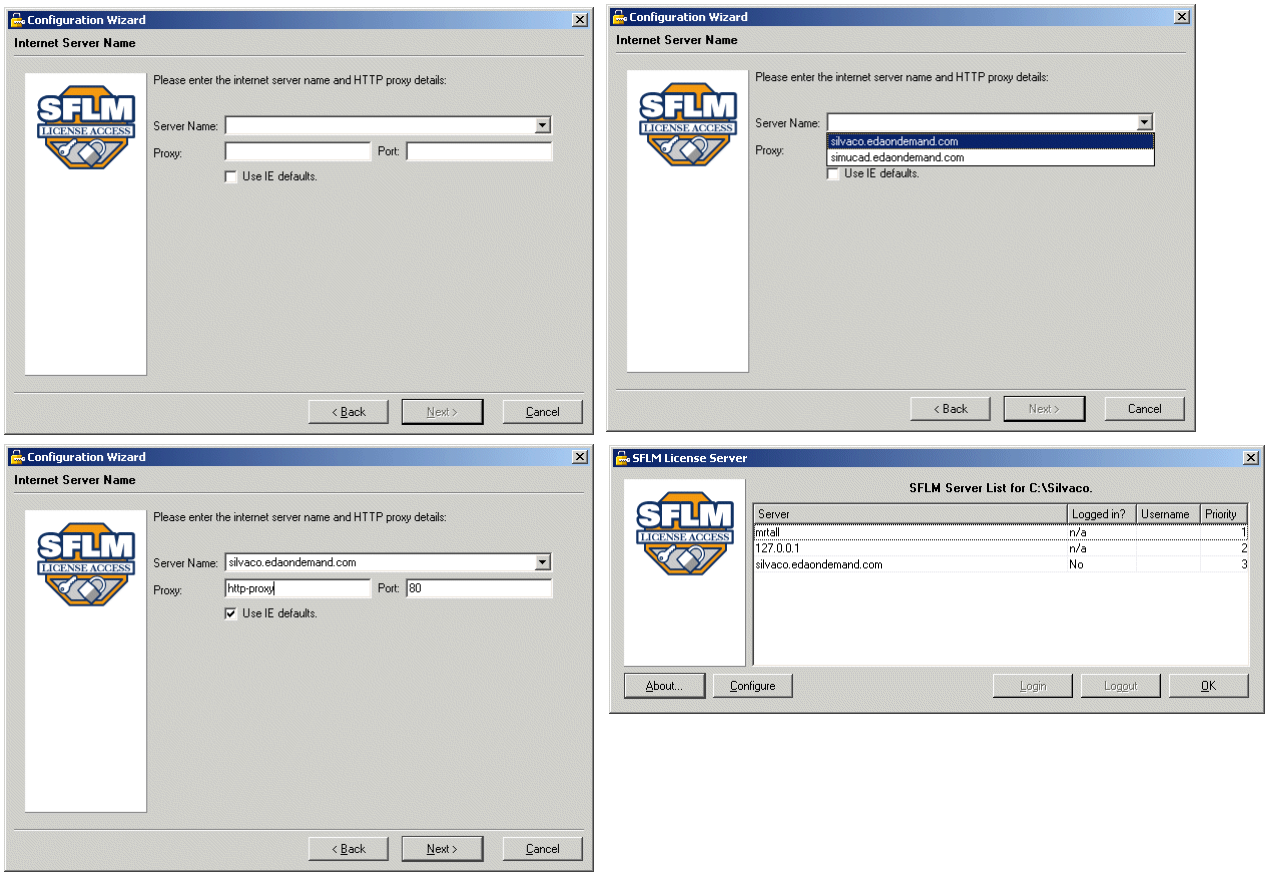

Figure 4-7: Adding a Server - Internet

4.4.3: Logging On to a Server

This is only for users of internet billing services, such as EDAonDemand.com. If the server has **n/a** (not applicable) in the **Logged in?** column, you do not need to login and the **Login** button will be greyed out.

To login to silvaco.edaondemand.com in the example, click on **silvaco.edaondemand.com** and click on **Login** (Figure 4-8). Then, enter your account **Username** and **Password** (Figure 4-9). If this works, the **Username** will be displayed in the **Logged in?** column. This login will be used for all jobs on the current machine with the current user ID. Therefore, each user will need to login on each machine they use.

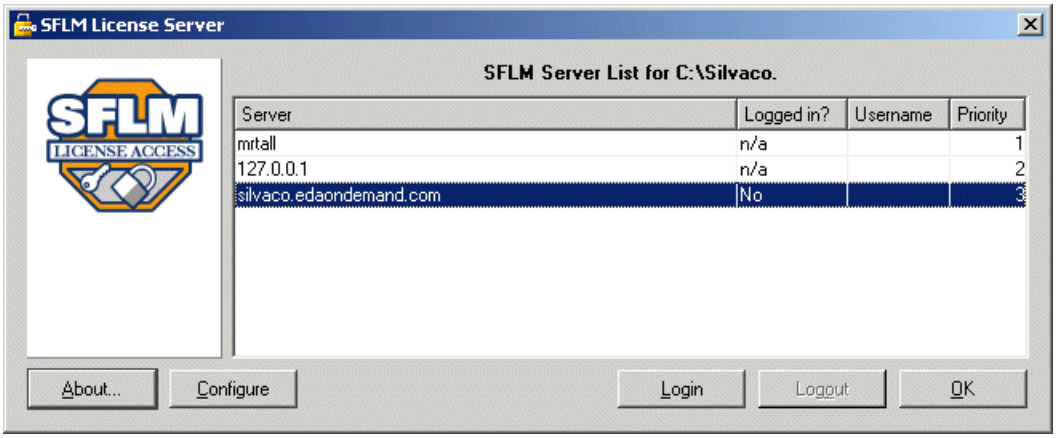

Figure 4-8: Logging On

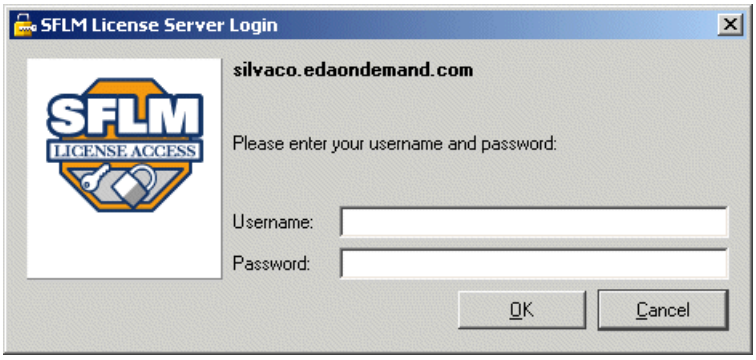

Figure 4-9: Logon Password

4.4.4: Adding a Server - Redundant

Add the three servers to the list which you registered as redundant servers (see Figures 4-9 and 4-10). See "Setting Up Redundant Servers" on page 9-3 for more details.

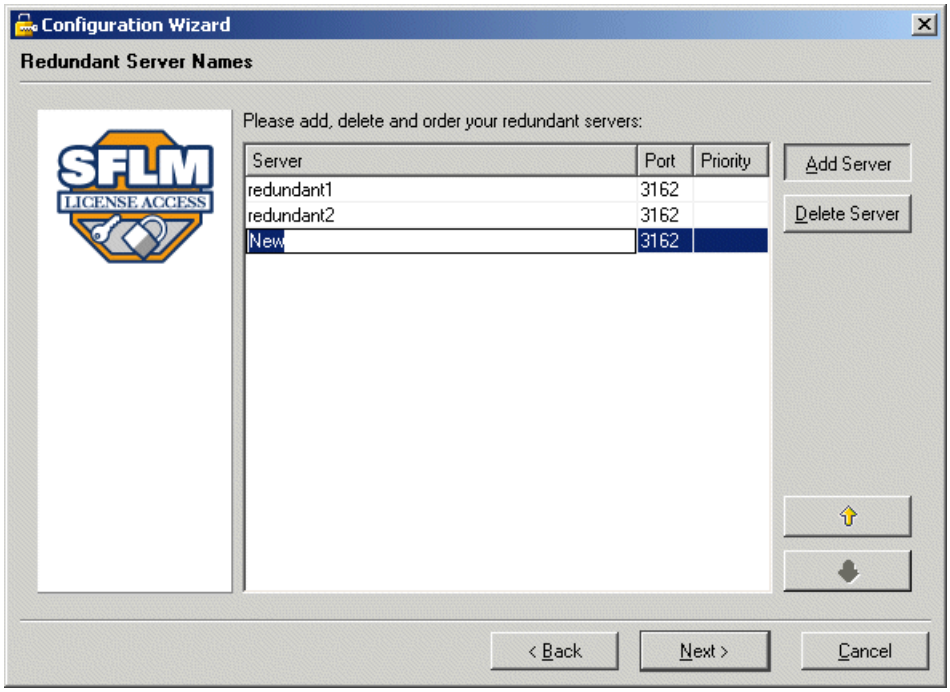

Figure 4-10: Adding a Redundant Server

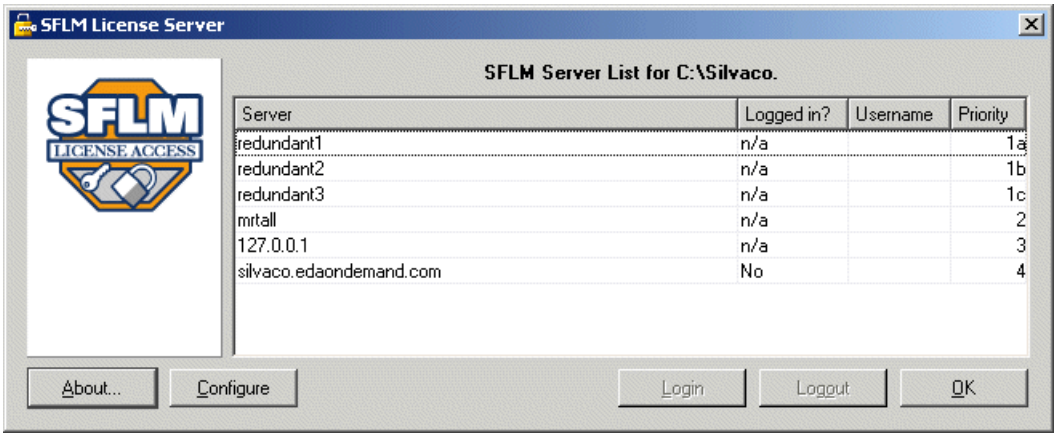

Figure 4-11: Server List

Chapter 5:
Customer Environment Settings

5.1: Setting The Path To The Software

On Windows, this is not an issue as the shortcut to start the SFLM server contains the path.

On Unix and Linux machines, you must set an environment variable in the terminal. The two most common Unix terminal shells are the C-shell and the Bourne-Again (Bash) shell. In these cases, you need the following changes.

C-Shell and test users should add the following to their `.cshrc` file:

```
set path = ( $path:q /<installdir>/bin )
```

Bash, sh (Bourne shell) and ksh users should add the following to their `.profile` file:

```
PATH="$PATH/<installdir>/bin"
export PATH
```

Note: `/<installdir>` is the path to the top directory of the vendor's installed software.

5.2: Choosing A Single License Server for a Specific User

There are two ways that an application will know the name of the license server. One way is by using a global setting in the installation (see Chapter 4: “Specifying the License Server(s) Using SFLM Access”). Another way is from a local users environment settings.

5.2.1: Local Settings for Individual Users

Individual users may choose a particular license server by creating the environment variable `SFLM_SERVERS` in their user environment and giving it the name of their chosen server. This setting will override the global setting that was created.

5.2.2: How to Set the SFLM_SERVERS Environment Variable

C-shell Unix and Linux users should add the following to their `.cshrc` file:

```
setenv SFLM_SERVERS "sflmserver"
```

Bash shell Unix and Linux users should add the following to their `.profile` file:

```
SFLM_SERVERS="sflmserver"
export SFLM_SERVERS
```

Windows users should right click on **My Computer** and select **Properties→Advanced→Environment Variables**. A screen will appear that will allow the setting of environment variables.

Note: The name `sflmserver` is the machine name of the new license server.

Note: SFLM_SERVERS has replaced the environmental variable SFLM_SERVER. If both variables are set, SFLM_SERVERS will be used for new applications (SFLM 5 and above). SFLM_SERVER will be used for old applications (SFLM4 and below).

5.3: Choosing Multiple License Servers for a Specific User

If the network contains multiple license servers, you can change the SFLM_SERVERS environment variable to access all of them. For instance on Unix C-shell:

```
setenv SFLM_SERVERS "MachineA MachineB MachineC"
```

The application in this case will first attempt to get a license from machineA. If it fails, it will try machineB and finally try machineC.

Note: 1. It is important that spaces exist only between machine names. No spaces are allowed within one machine name.

2. Each machine has a full SFLM installation, which is stand alone. This is not a redundant server setup.

3. All the servers need to undergo the Registration process.

5.4: Choosing a Redundant Server Cluster for a Specific User

If the license server is set up for redundant servers, first set up the single server setup (see Section 5.2:"Choosing A Single License Server for a Specific User"). Then, make one more change.

The SFLM_SERVERS environment variable should be changed to the three machines set up for redundancy each separated by the | sign. For example, for Unix C-shell:

```
setenv SFLM_SERVERS "MachineA|MachineB|MachineC"
```

Note: All the redundant servers need to undergo the Registration process and the license file is specifically generated by the vendor to allow redundant servers.

Note: No spaces should be next to the | character in the SFLM_SERVERS variable.

5.5: Testing User Environment

To test the user environment, run:

```
sflm_monitord -env
```

It should return something like:

```
SFLM_SERVER=mrtall
SFLM_SERVERS="mrtall:3162/ 127.0.0.1:3162/"
SIPC_SERVER=mrtall
```

or with a more complex setup:

```
SFLM_SERVER=redundant1
SFLM_SERVERS="redundant1:3162/|redundant2:3162/|redundant3:3162/
mrtall:3162/ 127.0.0.1:3162/ silvaco.edaondemand.com:80/http-proxy:80"
SIPC_SERVER=redundant1
```

If it returns:

```
sflm_monitord not found
```

use:

```
/<installdir>/bin/sflm_monitord -env
```

or add it to you use path using the description in Section 5.1:“Setting The Path To The Software”.

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6.1: Administration Features

To access the Administration page, click the **Admin** link on the SFLM home page (Figure 6-1).

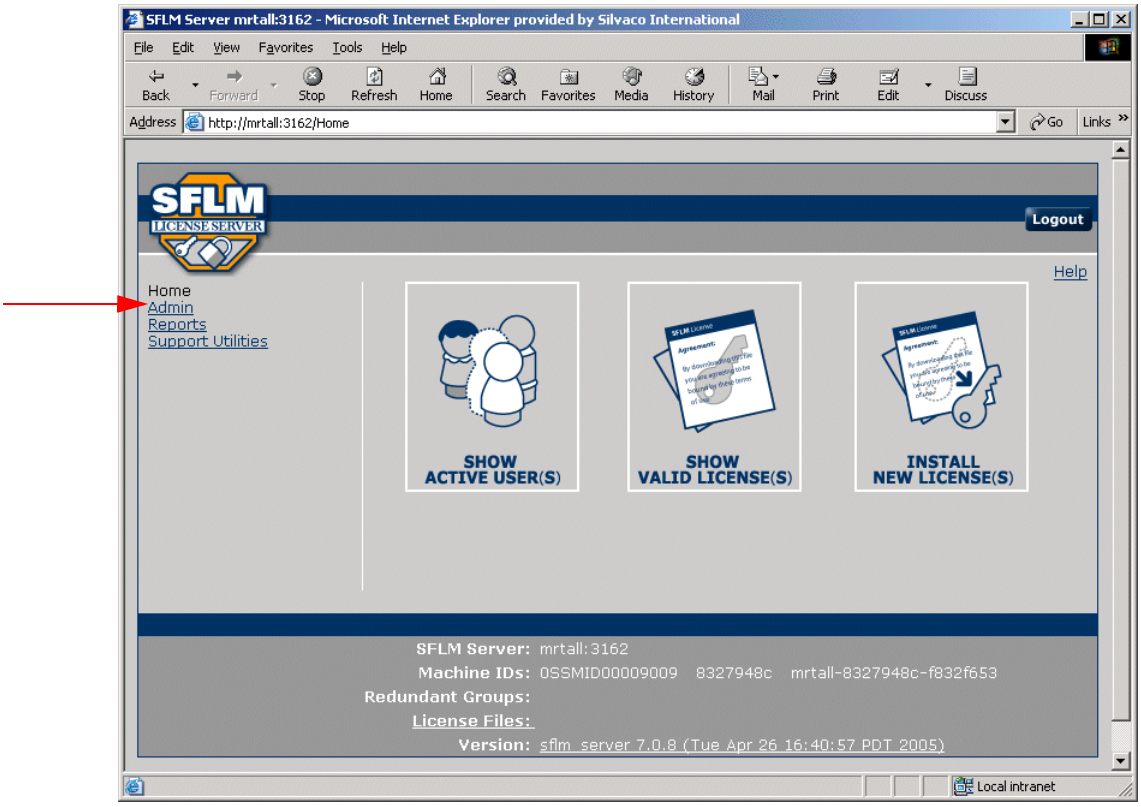

Figure 6-1: Main SFLM Home Page

Before you can access these pages, you need to enter password. This is entered as described at the beginning of Chapter 2: “Registration”. There are seven **Admin** features that will be described in the following sections.

6.1.1: Install New License(s)

You can access this feature if a new license file is ready to be installed. As an example, if you purchase additional licenses of a product, the vendor will create a new license file. You can then use this feature to install the new license file. See Chapter 3: “License Installation”for more details.

6.1.2: Change Password

When SFLM was first installed on the license server machine, as described at the start of Chapter 2: “Registration”, you were prompted to enter a password. This page allows you to change this password. First, enter the original or current password. Then, enter your new chosen password and re-enter this password to confirm it.

If you forget your password for the SFLM server, reset it outside the web front end. You will need to be the root or administrator user, on the machine where SFLM was originally installed, within a Unix shell.

```
/<installdir>/bin/sflm -stop
/<installdir>/bin/sflm -set-password
/<installdir>/bin/sflm -start
```

You will need to set a password during the `-set-password` step. In a DOS window, use the following.

DOS Commands	Example
`<install_drive>:`	`C:`
`cd <installdir>\bin`	`cd \simucad\bin`
`sflm -stop`	`sflm -stop`
`sflm -set-password`	`sflm -set-password`
`sflm -start`	`sflm -start`

6.1.3: Re-Register License Server

If the hardware within the license server machine changes, then the machine credentials that identify that machine as the license server may also change. This may affect the operation of the license server. If this occurs, access this option to re-register the machine credentials and reactivate the license server.

Note: You may need a new license file generated by the vendor if the re-registration process assigns a different **Code Name** to your server. Your **Code Name** is shown in the machine IDs list at the bottom of the SFLM web page http://servername:3162. For example, in Figure 6-1 it is 0SSMID10001820. This will depend on the extent of the changes on your machine.

6.1.4: Setup Redundant Servers

This feature is available to prevent engineering downtime if for any reason the SFLM server, or its machine, crashes. If this occurs, applications will hang, all current jobs will be paused, and no licenses can be issued until the server is restarted or the machine is repaired. Although all jobs shall continue once the license server is restarted, this can be a significant management issue. The SFLM redundant server system is one method to ensure that this problem does not result in any engineering downtime.

The system requires that 3 machines be designated and installed as redundant license servers. The same license file is installed on each machine. Each machine is then set up to identify the primary, secondary or tertiary server. When an application requests a license, it will attempt to contact the primary license server in normal system operation.

If it cannot contact the primary server (the machine may have failed), it will then attempt to contact the secondary server. You will experience a short pause until the secondary server takes over.

The redundant system requires that at least 2 machines are alive and communicating at any given time. The SFLM servers communicate to each other on license usage. When the primary machine returns to the system, it will then take over the license control.

Note: This system is only available to software vendor applications that are SFLM6 (or above) compliant. SFLM4 applications should point to the primary server and will only run as long as that server is up and running.

Setting Up Redundant Servers

This feature is on a "per request" basis, so you will first need to contact your software vendor account manager and request this licensing option.

There are 4 steps to set up redundancy. Each step must be performed separately on all three redundant server machines. When connecting to a server using a web browser, you can run the web browser on any machine that is networked to the server.

1. Run `sflm -install` as described before on all three machines.
2. Bring up a web browser on each machine, type in the URL `http://<servername>:3162/` (where machine is the hostname of the machine), and then go through the registration procedure that will be initiated (as described in Chapter 2: "Registration"). Then, wait to be contacted by your vendor.
3. Your vendor will inform you when your license file is ready to be downloaded. When you receive this message, open your web browser at `http://<servername>:3162/` and click on **Install new License(s)** (as described in Chapter 3: "License Installation"). Download the license file from your vendor and install it with the web browser.
4. When steps 1-3 are complete, open your web browser at `http://<servername>:3162/`, click on **Admin** and then **Setup Redundant Servers**. The Set Up Redundant Servers Page will appear (Figure 6-2). To add a server, type in the SFLM server name of each machine chosen to be a redundant server and click **Add**. The SFLM server name will appear at the bottom of the web browser.

   The order that servers are shown in the Server list will decide which is primary, which is secondary and so on. You can change the order any time by selecting a server from the list and using the control buttons on the right hand side (**Move to Top**, **Move Up**, **Move Down**, **Move to Bottom**, and **Delete**). If communication is broken with a server, a line will be drawn through the name of that server in the **Redundant Groups** line.

Note: All 4 steps must be performed on all 3 of the redundant servers. The servers will then be able to communicate with each other. This will be displayed at the bottom of the web browser SFLM page on the **Redundant Groups** line. The environment for each user then needs to be changed to specify the redundant server names.

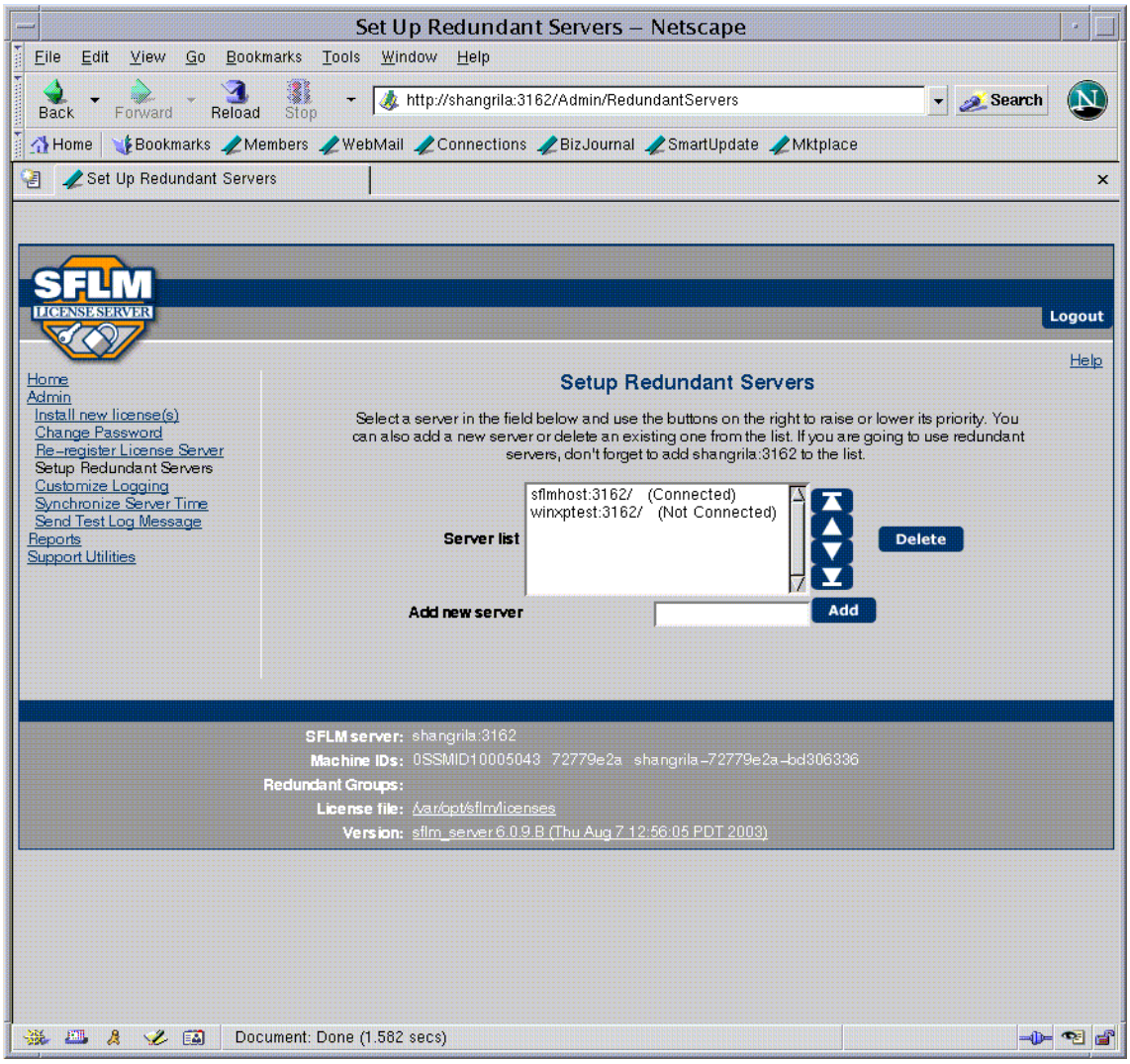
Set Up Redundant Servers – Netscape
File Edit View Go Bookmarks Tools Window Help
Back Forward Reload Stop
http://shangrila:3162/Admin/RedundantServers
Search
Home Bookmarks Members WebMail Connections BizJournal SmartUpdate Mktplace
Set Up Redundant Servers
SFLM LICENSE SERVER
Logout
Help
Home
Admin
Install new license(s)
Change Password
Re–register License Server
Setup Redundant Servers
Customize Logging
Synchronize Server Time
Send Test Log Message
Reports
Support Utilities
Setup Redundant Servers
Select a server in the field below and use the buttons on the right to raise or lower its priority. You can also add a new server or delete an existing one from the list. If you are going to use redundant servers, don't forget to add shangrila:3162 to the list.
Server list
sflmhost:3162/ (Connected)
winxptest:3162/ (Not Connected)
Delete
Add new server
Add
SFLM server: shangrila:3162
Machine IDs: 0SSMID10005043 72779e2a shangrila–72779e2a–bd306336
Redundant Groups:
License file: /var/opt/sflm/licenses
Version: sflm_server 6.0.9.B (Thu Aug 7 12:56:05 PDT 2003)
Document: Done (1.582 secs)

Figure 6-2: Set Up Redundant Servers Page

6.1.5: Customize Logging

Any action that SFLM server performs, such as a license check out or check in, can be logged to a file for later reference. Such information can be useful if you want to study license usage rates for different products or to examine any warnings or errors produced. All the necessary data will be in this file.

To access this feature, click on **Admin** and click on **Customize Logging**. The Custom Logging Page will then appear (Figure 6-3). This page controls two log locations: one in the system log (e.g., `/etc/syslog.conf` on Solaris machines) and the other in a user-defined file.

The default system log level is **Notice**. No file logging is done by default. A description of available logging levels is given at the end of this section. It is common to change the system log level to **Information** to log license check-outs and check-ins, which can the be used by the `sflm -stats` command.

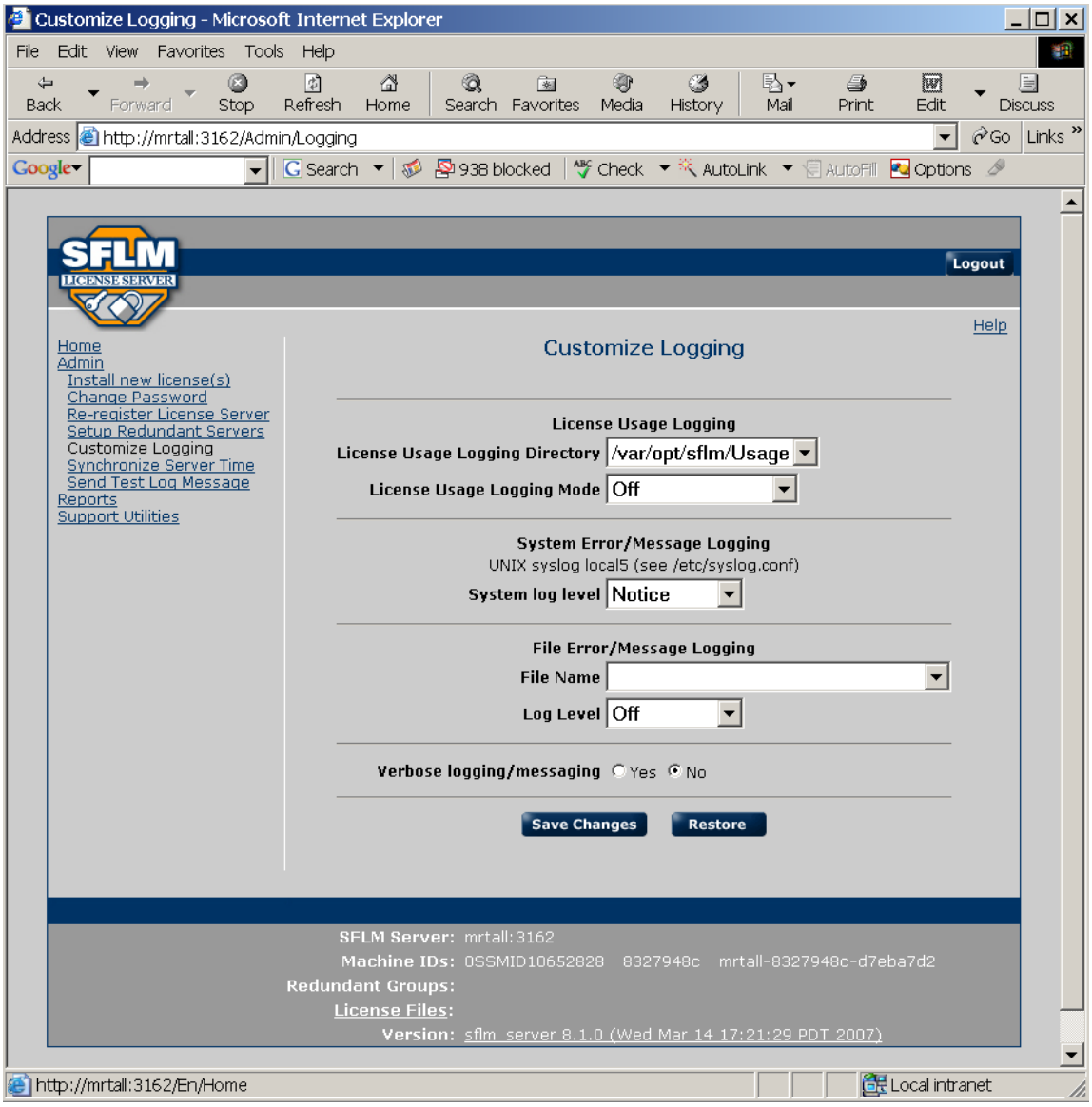

Figure 6-3: Customize Logging Page

License Usage Logging

License Usage Logging Directory

The directory where license usage summarries and logs are kept. You can change the list of possible locations by setting the environmental variable `SFLM_USAGE_DIRECTORIES` before starting the server.

License Usage Logging Mode

This controls how much information is kept in the usage log directory.

Table 6-1: License Usage Logging Mode Options	
Option	**Description**
Off	No logging.
ProductSummary	Generates a summary of each product (license ID) usage.
UserSummary	Generates a summary of each product (license ID) used by each user as well as the combined product usage for all users.
ProductLog	All license check-outs and check-ins are logged. The ProductSummary is also generated.
AllLogging	All license check-outs and check-ins are logged. The UserSummary is also generated, which includes the ProductSummary.

Note: Logging check-outs and check-ins may require significant amounts of disk space.

System Error/Message Logging

This controls the log messages passed to the system logger. On UNIX, this is passed as local5 and is controlled by `/etc/syslog.conf`. On Windows, they go into the Application Log that can be viewed using the Event Viewer.

System Log Level

This pull down menu controls the individual logging level for the system logging. See "Log Levels" on page 6-7. The default level is **Notice**.

File Error/Message Logging

Instead of using the system's logging capabilities, the SFLM server can simply write messages to a file. This is easier to set up but has dangers since nothing is monitoring the log sizes.

Table 6-2: File Error/Message Logging	
Option	**Description**
File Name	This specifies the file to append the log message onto.
Log Level	This pull down menu controls the individual logging level for the user defined log file. See "Log Levels" on page 6-7. The default level is **Off**.

Verbose logging/messaging

This is **Off** by default. Switching to **Yes** will result in more details in some web pages and some log messages.

You can reload all the current server settings from the server by clicking on **Restore**. To save any changes you made, click on **Save Changes**.

Log Levels

These log levels control the seriousness of the messages being logged. When set to a level, messages from that level and above are logged. For example, if the log level is **Error**, then **Error**, **Critical**, **Alert**, and **Emergency** messages are also logged. These levels coincide with the standard UNIX log message levels.

Severity Levels

Table 6-3: Logging Levels in SFLM Server

Severity Level	Description
Off	No logging is performed
Emergency	A panic condition.
Alert	A condition that should be corrected immediately. Examples of this include: • Errors contained in the license file(s) will be reported. This could occur if the file has been corrupted or if it has been edited (which is not allowed). • SFLM is installed on a system not specified in the license file. • System clock has been changed. • License(s) close to expiration will be reported. • License(s) that will only be active at a time in the future. • SFLM server exits. • Server is low on memory.
Critical	Critical conditions. Examples of this include: • Hardware failure such as a hard disk error. • Memory corruption.
Error	Errors. Examples of these include: • Cannot get MAC address. • Unable to register program. • SFLM installation failure.
Warning	Warning messages. Typically non-fatal. Examples of these include: • Un-terminated string received by server. • Obsolete license(s).
Notice	Conditions that are not error conditions, but that may require special handling. Examples of these include: • Failed attempts to check out a license. • Notice that verbose mode is turned on. • Attempt(s) to connect to a port. • The machine identification has changed perhaps due to new hardware. • Server status is in the process of being cleared. • Reading of a particular license file.

Information	Informational messages. Examples of these include: • License check out and in. This information contains the username, machine name, product name and process ID. • Other requests that can be safely ignored.
Debug	Messages that contain information normally of use only when debugging a program.

6.1.6: Synchronize Server Time

A logical clock is kept by the SFLM server software, which can sometimes stray from the local system clock. This option will synchronize the logical time with a clock at your vendor. Only access this feature if the times are 1 hour or more apart.

6.1.7: Send Test Log Message

The SFLM server logs license requests and license release information as described in Section 6.1.5: "Customize Logging". You can send a test message with this particular option to establish that the logging customizing was successful.

Chapter 7:
Reports Page

7.1: Types of Reports

To access the Reports page, click the **Reports** link on the home page (see Figure 7-1). This gives you access to three different reports that provide detailed information the license administrator may require.

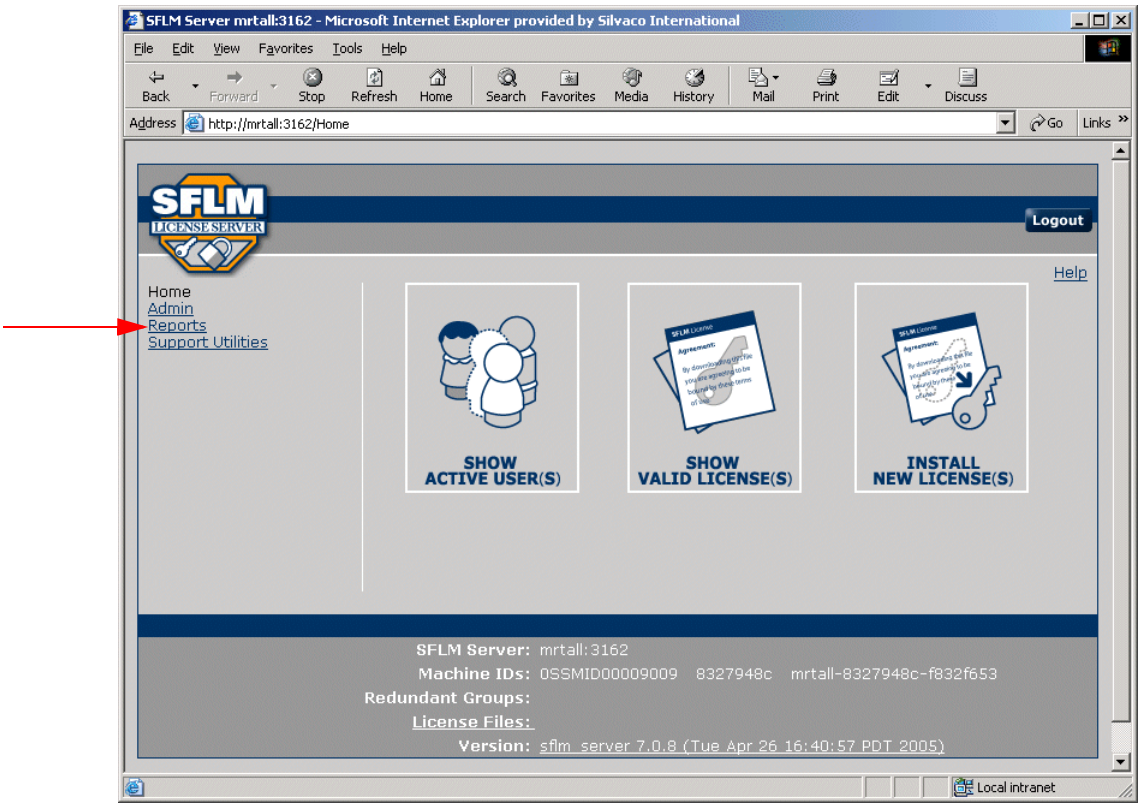

Figure 7-1: Main SFLM Home Page

7.1.1: Active User(s)

This option will generate information on licenses that are currently checked out from the SFLM server by **Job**. A job is an application that requests a license. A total count of jobs and a table of jobs are reported.

- **User and Prorgram**: User name of the person running the application and the program name and version that checked out the license(s) from the SFLM server.
- **Job**: The job number (a.k.a. Process ID) of the application on a particular machine. Each time an application runs, the operating system assigns a unique ID to that job. This is commonly known as the PID. Clicking on this field will give a more detailed report about the job.
- **Host**: Host name or machine name on which an application is running.
- **License**: Information on which licenses the job is using. If a license request failed, it shows the licenses that failed to be granted.

7.1.2: Valid License(s)

This option will generate a table that contains a complete list of all licensed applications. This list is derived from all the license files that are installed on the server. Each row of this table is dedicated to one application and gives five columns of information: **Number of Licenses**, **Product** and **Users**.

- **ID**: The ID of the license (a.k.a. product). Clicking on this link will provide a detailed list of all licenses related to this license ID in all license files installed.
- **Name**: The name of the license (a.k.a. product). Clicking on this link will provide a detailed list of all licenses related to this license ID in all license files installed.
- **Valid**: The number of valid (purchased) licenses active for this server.
- **Free**: The number of valid licenses that are currently free.
- **Maintenance Date**: This is date license maintenance expires for this license. There may be multiple dates if licenses expire at different times. Applications that are newer than the maintenance date cannot use that license.

Note: Licenses that have completely expired will not show up in this list.

7.1.3: Token Charges

This option will generate a table containing the number of active tokens and another table, which shows the number of tokens required to use as a specific license.

- **ID**: The ID of the license (a.k.a. product). Clicking on this link will provide a detailed list of all licenses related to this license ID in all license files installed.
- **Name**: The name of the license (a.k.a. product). Clicking on this link will provide a detailed list of all licenses related to this license ID in all license files installed.
- **Cost**: The number and type of tokens required to grant this type of license when tokens are used.
- **Active**: The number of valid (purchased) token licenses active for this server.
- **Free**: The number of valid licenses that are currently free.
- **Maintenance Date**: This is the date license maintenance expires for this license. There may be multiple dates if licenses expire at different times. Applications that are newer than the maintenance date cannot use that license.

Note: Licenses that have completely expired will not show up in this list.

7.1.4: License Status

This option will generate a table that contains a complete list of specific licenses. This list is derived from all the license files that have been installed on the server and are valid for that server. It includes the licenses that can be granted using token licenses. The table also includes who is using licenses and how many are free.

- **License ID**: The ID of the license (a.k.a. product). Clicking on this link will provide a detailed list of all licenses related to this license ID in all license files installed.
- **License Name**: The name of the license (a.k.a. product). Clicking on this link will provide a detailed list of all licenses related to this license ID in all license files installed.
- **Users**: A list of users who have checked out licenses for this particular product. Users are identified by their login name. Clicking on a user name will show all jobs owned by that user.
- **Used**: The number of licenses used by each user.

- **Free**: How many more of this type of license can be checked out if all free tradition licenses and all free tokens are used. This does not include OMNI licenses. N/A indicates an unlimited number of these licenses may be checked out.

7.1.5: Installed License File(s)

SFLM allows multiple license files to be loaded concurrently. This report shows a table where each row gives a report on an individual license. The columns report the license filename, the license ID number and the current status of the license. If you log in as Administrator before going to that page, it also allows you to remove license files.

- **License Filename**: The current location of the license file on the license server machine.
- **License ID**: A unique identifier for the license that your vendor has provided. If you contact your vendor regarding licensing or general support, then you should know this license ID number before you contact them.
- **Status**: Active and expired machine IDs that are found in that license file. These IDs identify the machine(s) where the license may be installed.

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8.1: Overview

The support utilities are intended to be used whenever the license server has a problem and will not issue a license to a user request. It is not a part of the general operation of the SFLM license server. To access the support utilities, click on the **Support Utilities** link on the main SFLM home page (Figure 8-1).

Figure 8-1: Main SFLM Home Page

Four utilities are available that report information and can be used to identify the problem, list environment variable, redundant server status, server resource usage and server status & version. The information from these four options should be supplied to your vendor if (or when) it is requested. They are accessible through the web interface to your license server.

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Chapter 9:
Virtual Private Networks (VPNs) and Firewalls

9.1: Virtual Private Networks (VPNs)

VPNs are becoming increasingly popular as they allow workers to remain at home while still connected to the office network through their own internet connection.

To enable SFLM with a VPN setup, the ports 3162 and 111 must be open for incoming connections to the server. These ports are registered to the SFLM software and are used by it only. Port 111 is only used for older applications (using SFLM4).

Remote users connected to the internet will be able to access office SFLM servers if these two ports remain open.

9.2: Firewalls

Currently, many machines have firewalls or port blocking software especially Windows XP machines.

XP Service Pack 2 enables a firewall that prevent local Web Servers from being accessed from other machines. Because SFLM is a Web server, it cannot be accessed by other machines once Service Pack 2 has been installed. To overcome this problem, issue the following four commands.

```
netsh firewall set portopening proto=tcp port=3162 "SFLM-Standard Floating
License Manager"
netsh firewall set portopening proto=udp port=3162 "SFLM-Standard Floating
License Manager (UDP)"
netsh firewall set portopening proto=tcp port=111 "ONC/RPC portmap"
netsh firewall set portopening proto=udp port=111 "ONC/RPC portmap (UDP)"
```

SIPC may also have problems so include the command that opens its port.

```
netsh firewall set portopening proto=tcp port=2809 "SIPC-Corba Name Service"
```

If you wish to be more secure, you can enable certain programs to receive messages through the firewall. Since these programs are versioned, you will have to perform these procedures again when a version is installed. For example:

```
C:\Simucad\bin\rpc.sflmserverd -WV
```

returns something such as `6.4.2.R`. Substitute the number returned for `6.4.2.R` below.

```
netsh firewall set allowedprogram
"C:\Simucad\lib\rpc.sflmserverd\6.4.2.R\x86-nt\rpc.sflmserverd.exe" "SFLM-
Standard Floating License Manager"
netsh firewall set allowedprogram "C:\Windows\system32\portmap.exe" "ONC/RPC
portmap"
```

Also, for example:

```
C:\Simucad\bin\sipc -WV
```

returns something such as `1.0.9.R`. Substitute the number returned for `1.0.9.R` below.

```
netsh firewall set allowedprogram C:\Simucad\lib\sipc\1.0.9.R\x86nt\sipc.exe
SIPC-Corba Name Service"
```

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Chapter 10:
SFLM Compatibility

10.1: Older Applications

A common occurrence will be the existence of networks that have a mixture of applications from different releases. An SFLM4 application is a product that was released with an SFLM4 license server. An SFLM6 application is a product that was released with an SFLM6 license server and so on.

If an SFLM4 license server is running on the system, it will only be able to serve SFLM 1.4-4 applications. It will **NOT** be able to serve licenses to SFLM6-8 applications.

If an SFLM6-8 server is running, it can give licenses to SFLM4-8 application.

Only an SFLM8 server can use token licenses. SFLM4-8 applications, however, can use these licenses from the SFLM8 server.

10.2: License Server ID

SFLM4 used either the hostid (from Solaris and HPUX operating systems) or a HASP key (dongle) to tie (or key) the license to a particular server. SFLM now uses an online registration process to provide a virtual hostid for all platforms or an optional HASP key for Windows and LINUX.

10.3: Upgrading an SFLM4 Installation

SFLM4 servers are no longer supported.

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Appendix A:
Frequently Asked Questions

A.1: How do I bring up the web front end to SFLM?

Before you can bring up the web front end, you must first install the SFLM application software. On Unix, do this by running the command:

```
sflm -install
```

as root on the license server machine. Then, you can open a web browser (e.g., netscape or internet explorer) and for the URL, type:

```
http://<server>:3162/
```

and replace the name `<server>` with the hostname of the machine where `sflm -install` was executed. The web front end will then appear.

A.2: What version of SFLM do I have?

To find the version of SFLM on your machine, run the command:

```
sflm -WVs
```

If the version reported back for the `rpc.sflmserverd` is less than 6.0.0.R, you need to upgrade.

A.3: What is registration?

Instead of being tied to a host ID, SFLM will give your machine a unique "virtual dongle" identification. To ensure that this number is unique, it must be compared with the database of all virtual dongle IDs kept by your vendor. You can do this automatically if you are online. Otherwise, you need to send this information by E-mailing to your vendor. This is called the Registration process.

A.4: What is activation?

A registration process will start when you start the server. The process is complete when you enter a Code Name and Activation Code. This means the server will now accept license files. When this is done online, the Code Name and Activation Code will be set automatically. If the registration was offline, you must enter the Code Name and Activation Code sent back by your vendor.

A.5: What should I choose - online or offline registration?

Choose online registration if the web browser is able to access the internet. If do not have access to the internet then register offline.

A.6: I have forgotten my password, what should I do?

You can reset your password outside the web front end. You will need to be the root on the machine where SFLM was originally installed and then run the command:

```
sflm -stop
sflm -set-password
sflm -start
```

A.7: When I run an application I cannot get a license, what should I do?

Make sure the license server is still alive. The SFLM software is designed to automatically start itself if, for any reason, it should be forced to close by any other program. You can check if the SFLM is running with the web front end. Click on **Reports** and then on **List Installed License Files**. The table that is displayed will tell you if the server is running.

If SFLM is not running, you will need to restart it from the command prompt. As root (or administrator), run the command:

```
sflm -start
```

A.8: How do I find out who has checked out a particular product license?

Open the web front end and click on **Reports** and click on **Show Active Users**.

A.9: What are redundant servers?

Eventually, either a machine or a network may become unreliable, and when you try to open an application, the application will be unable to contact the license server to get a license. The SFLM redundant server system is one method to get around this problem. The system requires that a minimum of 3 machines to be designated and installed as redundant license servers. The same license file is installed on each machine. Each machine is then set up as primary, secondary or tertiary servers. When an application requests a license, it will attempt to contact the primary license server. If it cannot contact the primary server, it will then attempt to contact the secondary server and so on. The redundant system requires that at least 2 machines are alive and communicating at any given time. The SFLM servers communicate to each other on license usage and when the primary machine returns to the system, it will then take over the license control. When installed, the system will be opaque.

A.10: How do I set up redundant servers?

See Section 6.1.4:"Setup Redundant Servers" for more information.

A.11: What can cause me to need to re-register?

The unique description of your machine is linked to many things, such as the machine name, disk number, and mac address. Typically, changing one piece of hardware (e.g., the hard disk) will not require re-registration. A number of hardware changes are necessary before re-registration will be required.

A.12: How can I reset the SFLM?

Some situations may occur infrequently where the active users report shows a license checked out for an application that you know has been terminated. To free this license, you can either wait one hour for SFLM to automatically remove this phantom license check out, or perform a manual reset of the server.

To manually reset SFLM, you need to login as root (on Unix/Linux) or Administrator (Windows), open a command terminal and run:

```
/<installdir>/bin/sflm -stop
/<installdir>/bin/sflm -start
```

In a DOS window, use the following.

DOS Commands	Example
`<install_drive>:`	`C:`
`cd <installdir>\exe`	`cd \sedatools\exe`
`sflm -start`	`sflm -start`
`sflm -stop`	`sflm -stop`

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